

Apnl. 1904

# **The ELECTRICAL WORKER**

OFFICIAL JOURNAL OF THE INTERNATIONAL  
BROTHERHOOD OF ELECTRICAL WORKERS.

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## **INDICATING TIDES WITH ELECTRIC APPARATUS**

By J. E. PRICE

IT is truly said, that "time and tide wait for no man." But though there is no waiting in either of these, long ago the flight of time began to be recorded; and now the actions of the tides, with the aid of electricity, are told almost as accurately as time is marked by clock or watch.

It is known that the variations of the tides are caused by influence of the sun and moon, but much in these particulars is yet unknown. These planetary forces act horizontally instead of vertically and are the same that deflect the plumb-line from the mean vertical. By their actions portions of the sea of proper depth and size, are made to oscillate in a way analogous to the vibrations of a pendulum.

Tide theories have been studied for many years, and such investigations have aided in determining the motion of the earth's axis of rotation relatively to the geographic poles, in determining the moon's mass, and in studying the mutual relations of the earth and moon. Investigations have resulted in the making of tide-tables used by sea-going people throughout the world; but these predictors are not always true, owing to influences impossible to calculate for. But science has, partly, now found a remedy for this, and in certain localities, the mariner can tell the exact stage of the tide. The Coast and Geodetic Survey has for several years had in successful operation tide indicators at Fort Hamilton, in New York Harbor; Reedy Island, in the Delaware River, and in San Francisco Bay. The indicators are fitted with dials nearly 30 feet in diameter, with

figures and divisions which can be seen at a distance of several miles. The indicator arms are moved by the direct action of the changes of water level, with which they are mechanically connected.

There is another kind of tide-indicator which does its work with the help of electric current, and can make its record miles from tide-water. Dr. G. Hasler, of Berne, Switzerland, was the designer of this but it has been much improved upon by Mr. E. G. Fischer, chief of the instrument division of the Coast and Geodetic Survey. Dr. Hasler's apparatus showed the stage of water on the dial, but the improvement not only indicates the height of the tide, but shows automatically whether the water is rising or falling.

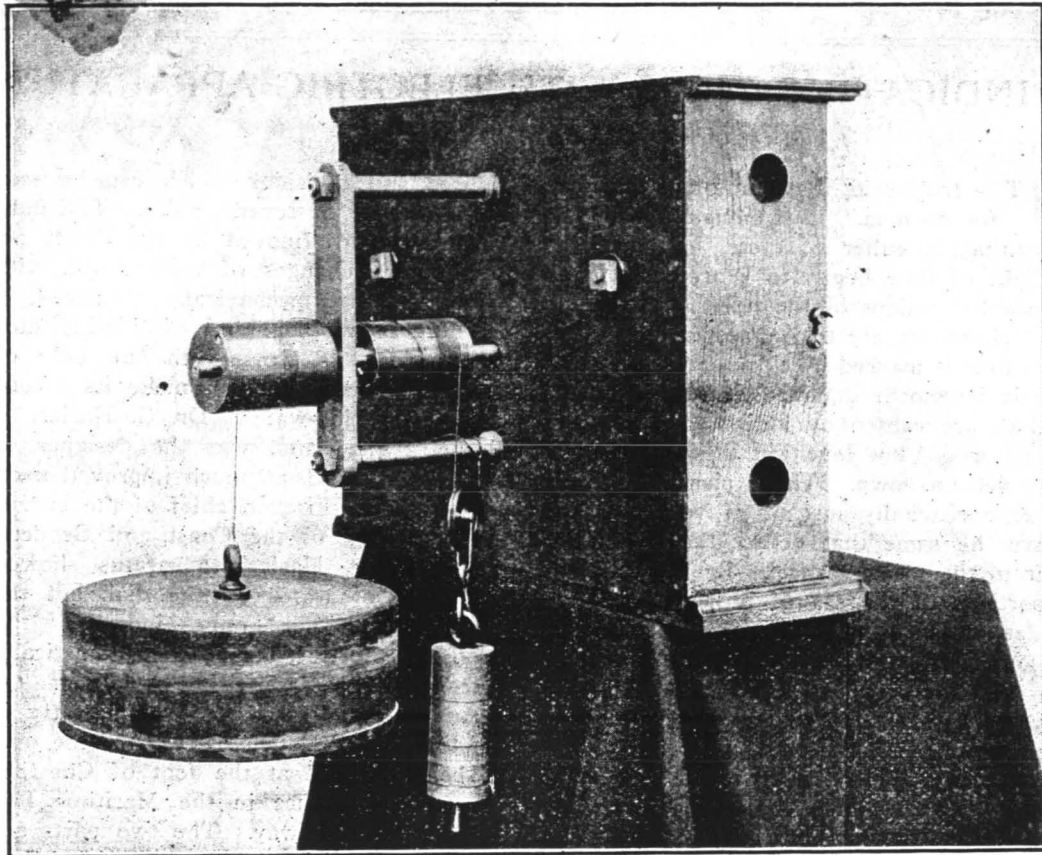
An improved electrical tide indicator is employed in Philadelphia, part of the outfit being located at the foot of Chestnut Street, the balance in the Maritime Exchange, a mile away. The two parts are connected by insulated wire, the first utilizing the rise and fall of the water to complete electrical circuits, which in the Exchange part, through the intervention of magnets, communicate the motion to the indicator arm and device by which the desired tidal information is displayed to the public.

In the water-moved part of the tide indicator there is an arbor behind the apparatus case carrying two brass drums; from one of these a float is suspended, and from the other depends a counter-weight. The same arbor, in the interior of the case, carries a six-toothed ratchet wheel,

and above the latter is placed a three-armed level, movable about the ratchet wheel; two horizontal arms carry pins which engage the ends of the vertical arms, pressing down on the latter—right or left according to the motion of the float in the water-tube—which connect with the ratchet-wheel. Resting on the bottom of the apparatus case are two cast iron reservoirs

circuit which brings the apparatus in the Exchange building in action. If the water-level rises the counterpoise causes the wheel to turn to the left and the mechanism on the right, operating in a similar manner through a second circuit and set of electro-magnets, produces opposite indications on the dial.

On an arbor which carries the indica-



FLOAT, DRUMS, AND MECHANISM CASE AT WATER STATION, PHILADELPHIA.

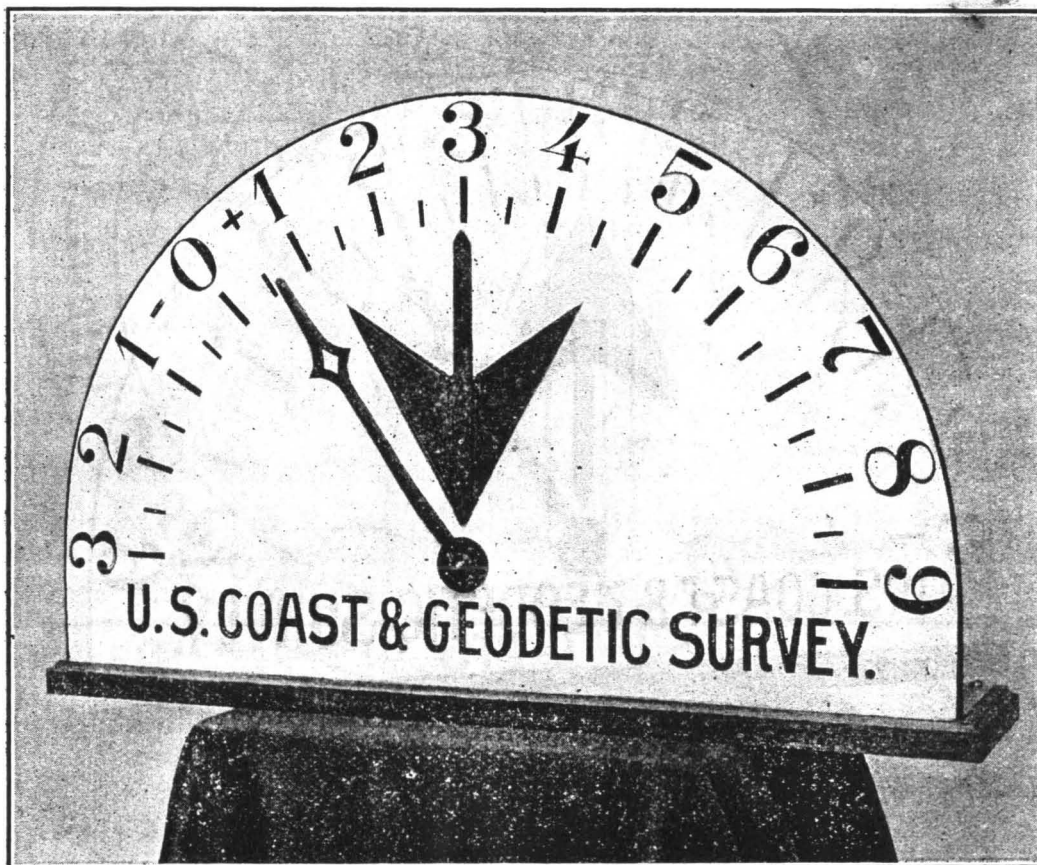
containing mercury and equipped with tubes. In the larger tubes, which are suspended from the outer ends of the lever arms, two cylinders plunge; in the smaller tubes protude electric contact ends.

If the level of the water is lowered the float, descending, causes the wheel (ratchet) to turn to the right; a lever raises the cylinders slowly until the arm trips, when the cylinder falls, compressing air in one of the large tubes, raising the mercury in the other, and producing a brief contact with a rod, thus completing the electric

tor arm, two pairs of wheels turn, each pair being riveted on a common barrel. A rod fixed in the middle of the arbor carries at one end a wheel, which engages the wheels of the barrel, and at the other end a counterpoise. On the completion of the circuit in the apparatus at the tidal station, if the current of the battery passes through the electro-magnet, the latter attracts the armature; with the interruption of the current, a coil spring draws back the armature level and a pawl makes the wheel advance one tooth. The wheels are

equipped with safety pawls, which permit turning only in one direction—one set forward, one backwards. Thus, if the current passes through a certain electro-magnet wheel turns backward one tooth, and the indicator arm moves a space showing a change in water level of one-tenth of a foot, while the other wheels remain stationary.

small arbors, to which are also attached levers having slots in their free ends and closing a pin set in the vertical arm. When the arm rises, at the fall of the water level, and brings the magnet into play, the slotted arms rise, revolving the arbors to which the vanes are attached and causing them to point downward. At the rising of the water level an opposite action is



TIDAL INDICATOR—FALLING TIDE

The direction of the arrow in the center of the dial shows whether the water is rising or falling. This indication is secured by use of two electro-magnets and a system of levers which control the position of the vanes making the head of the arrow. The magnets are in the same circuit, and when the circuit is completed, by the fall of the water an armature is attracted upward, the movement being transmitted through the various sections of a lever to its vertical arm, which is raised. The vanes of the arrow are fastened to two

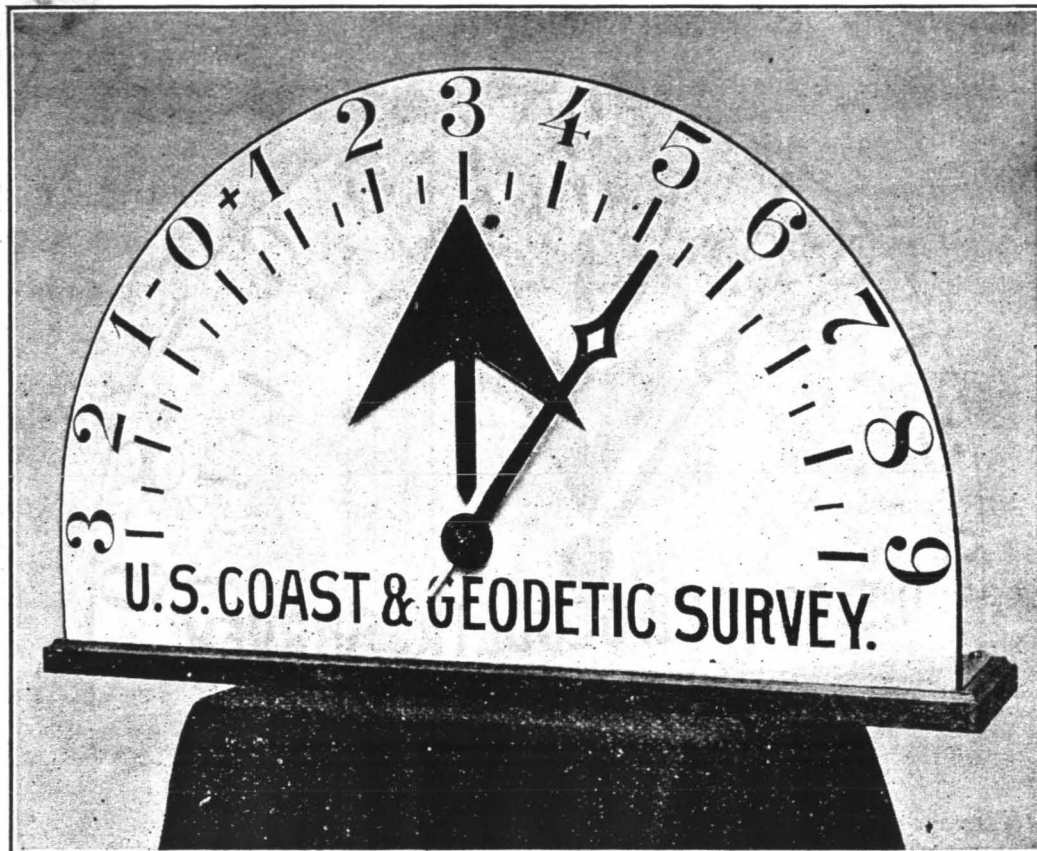
brought about and the vanes point upward.

The dial prepared for the apparatus in Philadelphia is divided so as to show the various stages of the water level from 3 feet below mean low water to 9 feet above the same plane. The indicator arm moves for every change of one-tenth of a foot in elevation.

While the tidal apparatus described herein is used for indicating the rise and fall of water at a moderate speed-rate, it is possible by the assistance of electric current to make indicators that can show

the stage of the most rapidly rising or falling tides. Of course, in some places, and at certain times, there is a tremendous inflow of river water, and it would require a very swiftly-acting machine to indicate its progress. The "bore" of the Hugh branch of the Ganges River, of the Brahmapootra and the Indus, would put any indicating or recording machine in extremely quick action.

nearer, until it seemed as if the whole ocean had risen up and was coming charging and thundering down on them, boiling over the edge of this pile of water like an endless cataract, from four to seven metres high, that spread out across the whole eastern horizon. This was the *pororoca*! When they saw it coming the crew became demoralized, and fell to crying and praying in the bottom of the boat, expecting that



TIDAL INDICATOR—RISING TIDE

The bore, or *pororoca*, of the Amazon is particularly swift and turbulent. A writer in *Science*, speaking of the experience of some natives on the Amazon during a *pororoca*, says:

"Shortly after the tide has stopped running out, they saw something coming toward them from the ocean in a long white line, which grew bigger and whiter as it approached. Then there was a sound like rumbling of distant thunder, which grew louder and louder as the white line drew

it would certainly be dashed to pieces and they themselves drowned. The pilot, however, had the presence of mind to heave anchor before the wall of water struck them; and when it did strike, they were first pitched violently forward, and then lifted and left rolling and tossing like a cork on the sea left behind them, and the boat nearly filled with water. But their trouble was not yet ended; for before they had emptied the boat, two other such seas came down on them at short intervals, toss-



ing them in the same manner, and finally leaving them within a stone's throw of the river bank, where another such wave would have dashed them upon the shore. They had been anchored near the middle of the stream before the waves struck them, and the stream at this point is several miles wide."

The *pororoca* sweeps inland with a force that levels trees and even large forest areas, changing the face of nature and often causing loss of life and property.

The explanation of this tidal phenomena is, that it is caused by the incoming water meeting resistance in the form of great sand bars in some places and narrow channels in others.

The writer is indebted for much information herein contained and for the illustrative material, to the kindness of the Coast and Geodetic Survey.

#### PORTLAND PROSPECTS.

Portland is to celebrate the Lewis and Clarke centennial in 1905, which fact is being used as an inducement by the various companies, contractors and real estate agents to bring workingmen of all classes to this town, and I regret to say that they have succeeded to the extent that they have overcrowded every branch of industry in the State at this early date. They do not, however, seem to be satisfied with this, as they still run ads in a great many of the eastern papers, assuring men that there is plenty of work in Portland. This statement we wish to most emphatically deny, for as I have before stated every branch of industry is overcrowded at the present time, and is becoming worse from day to day, owing to the continual influx of men and a decrease, rather than an increase, of work to be had. This is especially true of the building lines as there is less building going on here at the present time than for the past year.

Now, brothers, this is not written with any selfish motives, to keep you away from something which we want ourselves, but is as a warning to you not to come to this town expecting work as it would only work a hardship upon yourselves.

While we most earnestly request you to stay away, both for your own sake and ours,

until further notice, which notice will be published in the *WORKER* as soon as things open up here, should any of you be from Missouri we can do the necessary.

C. F. CANFIELD,

Secretary, Local No. 125.

Portland, Ore., March 18, 1904.

#### A KICK FROM No. 291.

As we, the members of 291, have had difficulty in getting a letter published in the *WORKER*, I was instructed to make a try. Of course 291 can get along without the letter being published all right, for we are doing well, having all but one in the union that are eligible.

No. 291 is in good shape at present—all but three members working, and they are on the sick list—one, Brother McCune with broken leg; Brother R. Cole with rheumatism, and Brother Brown with burnt hands. All doing well.

Work is not so plentiful here, but the present force is kept working.

PRESS SECRETARY, No. 291.

Boise, Idaho, March 23, 1904.

#### VINDICATED.

A notice appeared in the October *ELECTRICAL WORKER* scoring a brother, namely, Jos. H. Lyons, which was not justified by facts; but on the other hand was caused by too hasty action and without a proper investigation. The brother in question has been vindicated, and Local 142 takes pleasure in making this correction.

LOCAL UNION 142,

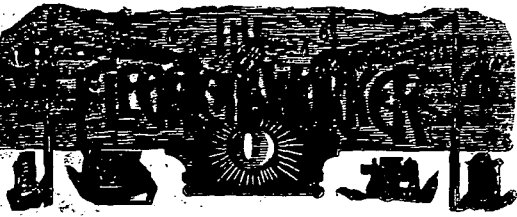
Geo. Wey, Secretary.

Wheeling, W. Va.

#### CHEAP PUBLIC TELEGRAPH.

In Australia you can send a telegram 4,500 miles for 24 cents. For short distances the rate is 12 cents for ten words, and these charges are found to be enough to make the telegraph system profitable.

The actual cost of Australia's telegraph system was \$18,000,000. The cheap rates are made possible by the fact that the Australian telegraph is not the property of a private company. It is owned and operated by the government and is a part of the postoffice system.



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**Subscription \$1 per year, in advance**

AS THE ELECTRICAL WORKER reaches the men who do the work and recommend or order the material, its value as an advertising medium can be readily appreciated.

WASHINGTON, D. C., APRIL, 1904.

JOHN MORRISON, Special Advertising Agent  
 25 Third avenue, New York City, N. Y.

*This Journal will not be held responsible  
 for views expressed by correspondents.*



THE HENRY E. WILKENS PRINTING COMPANY

SECRETARIES sending in death claims will confer a favor by giving name of party to whom money is payable. This will facilitate matters greatly.

In the report of the Grand Treasurer last month the press rollers, by pulling three figures from the form, subtracted \$166 from the salary of Grand President McNulty, leaving just 00. This was discovered by the pressman, however, and only a few hundred copies were so printed.

TRAVELLING brothers, please stay away from Mattoon, Ill., as there is trouble with the Central Illinois Construction Company.

We have been requested by Local 48, Richmond, Va., to announce that J. C. Wheat no longer holds office in their local. Secretaries are requested not to do business with him.

MEMBERS are asked to keep away from the Michigan Suburban Railroad job, Lansing, Mich., as it is considered unfair by Local, No. 352.

THE Brotherhood of Railroad Trainmen, the strongest of all railroad labor organizations, paid out the sum of \$116,900 in death and disability claims for the month of December, 1903. The total paid out since the formation of the organization is \$8,987,284.54. The brotherhood now has a membership of 70,000.

THE observant trade unionist, says *Mixer and Server*, will note that the fellow that is always exercising his lung power in hammering the union and its officers was never known to disturb the equanimity of the financial secretary by paying his dues in advance, nor creating a flurry in the union by bringing in applications for new members.

On April 1, 1904, Local No. 38, of Cleveland, presented their last year's agreement to the contractors, to be renewed for another year, but the contractors wanted the open shop. The local could not see it that way and walked out. After four days the contractors realized that the open shop was no good, and signed the agreement that Local 38 presented. The members of the local and contractors are to be congratulated on the speedy settlement of this strike.

NOTICE.

Linemen are requested to stay away from Harrisburg, Pa., as some of our "fixers" are pressing brick.

C. S. EBERSOLE,  
 Recording Secretary.

Local Union No. 53.

**BE SURE YOU ARE RIGHT, THEN GO AHEAD.**

On another page of this issue will be found an apology from one of our locals, in which the writer exonerates a brother from all blame. We wish to impress on the minds of our members the fact that we can not be too careful in matters of this kind. Never accuse any man of dishonesty unless you have direct evidence that he is guilty. Never sit down with eagerness to write up a brother unless you are positive of his guilt. It is a pleasure to us to publish the notice, and hope it will act as a warning to others. Don't be hasty in matters of this kind.

**AFFILIATE.**

We respectfully call the attention of our members to Section 2 of Article XII. of the constitution of the American Federation of Labor, which reads as follows:

"It shall be the duty of all national and international unions affiliated with the American Federation of Labor to instruct their local unions to join chartered central labor bodies and state federations in their vicinity, where such exist. Similar instructions shall be given by the American Federation of Labor to all trade and federal labor unions under its jurisdiction."

Our attention has been repeatedly called to the fact that there are many of our locals which are not affiliated with the central bodies of their respective cities, and wishing to obey the laws of the A. F. of L. we have communicated with many of the locals, and they would give all kinds of excuses for not sending delegates. We hope all of our locals will see the importance of affiliating with the central bodies. Remember, in unity there is strength.

**NRV MILLER'S GRAVE.**

We often receive communications from old-timers asking where the first Grand President of our Brotherhood is buried, and whether his grave was properly taken care of. Knowing the subject will be of interest to all of our readers, we take this opportunity of saying that Brother Miller lies in Glenwood Cemetery, and his grave is marked by a very pretty headstone. At the St. Louis convention a resolution was adopted to allow the Grand Secretary to

spend \$25 to fix up the grave. We visited the grave and find that he is buried in the Masonic plot, and that his grave, along with the rest in that plot, has received proper attention. The members can rest assured the grave will be properly cared for.

**NOTHING DOING.**

Work around New York is very slack at present and has been all winter. We would not advise brothers to come here just at present.

P. M. McLAUGHLIN,  
Business Agent.

Local No. 20, Greater New York.

**NOTICE.**

Locals are requested to take up traveling card, No. 31615, and not allow Chas. W. Foster admittance in any local until he settles with Local No. 25, Terre Haute, Ind. Should this card be presented kindly notify A. R. Markle, 1027 Seventh Avenue, Terre Haute, Ind.

**DULL IN PITTSBURG.**

I beg to ask the out of town brothers who contemplate coming to Pittsburg in the near future to refrain from so doing, as we have just got over a lockout of three months, and now have quite a number of our brothers idle. The outlook at present is far from promising, there being no new work starting in Pittsburg at the present time. Should conditions get better in the near future will be pleased to notify the brothers through THE WORKER.

S. R. SCHEIRER,  
Recording Secretary, Local No. 5.

**A DELUSION.**

Please note in your journal that the reported boom which has been spread broadcast throughout the country by the local papers of Omaha is a delusion of the disordered brains of the Business Men's Association. Hence their object to fill the town with mechanics to break up labor organizations.

J. A. BRADFORD,  
Secretary Central Labor Union.  
Lock Box 570.

## RESULT OF REFERENDUM.

The following is the exact vote by locals, received on or before March 18, as per notice in circular letter:

L.U.	YES	NO	L.U.	YES	NO	L.U.	YES	NO	L.U.	YES	NO	L.U.	YES	NO
1	250	...	61	32	2	139	20	2	220	8	6	336	9	4
2	33	32	62	17	1	141	...	7	225	...	15	338	...	7
3	...	1400	63	4	7	144	8	4	226	...	8	340	...	10
4	2	14	65	31	11	145	20	...	233	...	16	343	7	...
6	...	451	66	19	12	146	56	...	237	7	2	345	22	2
8	3	10	72	1	6	147	...	14	238	20	...	350	20	3
9	325	...	73	9	11	148	28	6	239	13	...	352	11	...
10	25	...	77	27	12	150	...	42	240	9	14	354	9	3
12	...	29	80	35	...	151	81	3	241	6	...	356	52	...
14	30	...	82	12	...	153	32	...	243	4	8	358	8	...
15	4	21	83	60	...	155	14	1	244	53	...	359	9	...
16	5	7	84	...	15	158	...	5	247	...	419	366	3	7
18	24	42	86	7	2	159	10	...	249	...	7	372	21	...
19	2	8	87	12	...	161	29	...	251	9	...	376	...	400
20	47	15	88	20	...	162	9	...	256	16	...	379	11	2
21	32	...	90	19	...	164	...	92	258	36	...	388	12	...
23	18	31	91	10	11	167	...	11	259	14	...	392	27	...
25	14	3	92	2	6	169	...	22	263	12	...	393	...	26
26	19	9	95	18	3	172	25	...	264	...	17	397	8	...
27	37	2	98	19	15	173	9	2	265	28	...	398	2	6
28	...	98	100	...	34	174	...	17	266	33	...	400	3	13
29	11	3	101	9	...	175	5	3	267	...	30	406	3	9
30	24	...	102	...	41	176	41	...	270	...	31	407	5	10
33	3	10	104	78	1	178	25	...	272	...	12	412	6	...
36	17	...	105	...	16	183	10	...	274	...	12	422	8	2
37	38	...	108	...	14	184	7	3	280	...	36	424	10	17
38	23	24	109	6	3	185	11	1	286	10	...	425	...	20
39	216	...	112	67	...	186	32	...	288	5	5	426	21	...
41	65	1	114	...	25	187	3	14	290	2	12	427	...	11
42	1	18	115	...	15	190	33	...	291	10	3	428	...	11
43	31	...	116	2	20	193	10	2	296	8	...	431	12	...
44	37	...	121	13	8	194	7	...	297	7	...	436	...	8
45	36	...	122	7	...	196	13	...	299	50	2	438	1	25
47	3	11	123	19	...	197	...	27	300	54	...	439	5	1
48	10	...	126	8	3	198	12	1	301	11	...	440	...	10
49	...	75	129	15	...	200	...	21	309	12	...	443	5	...
51	15	1	130	37	...	201	...	14	310	...	18	444	8	1
52	27	4	131	...	21	205	26	...	316	9	10	445	13	10
53	8	8	132	14	4	209	5	8	319	...	32	448	...	17
54	28	...	133	...	50	210	27	...	324	11	...	450	...	7
55	27	1	134	450	10	213	16	...	325	16	...	451	17	...
58	8	...	135	...	13	214	9	1	326	4	15	452	10	3
59	22	3	137	17	1	216	12	...	330	12	...	455	13	...
60	17	1	138	...	7	218	23	...	331	20	...			

Total YES—4181.

Total NO—4430.

The votes from Locals Nos. 191, 409, 278 and 180 were received after the stipulated thirty days had expired.



While their votes came too late to be counted, we nevertheless publish them:

180, Vallejo, Cal., no, 31. 278, Rock Island, Ill., no, 31. 191, Everett, Wash., yes, 9; no, 1. 409, Ithaca N. Y., no 12.

A circular letter was sent to each local, giving the result. We shall do everything in our power to make THE ELECTRICAL WORKER better with each issue. Short letters of interest to all our readers will be published.

There is no denying the fact that many of the long letters published before the change, were never read—just a casual glance to see what the chances were for work, and that was about all. Of course, we have some members who read them all, but very, very few. Remember, brevity is the soul of wit. It does not require long letters to tell the chance of work, and how your local is progressing. Remember, the majority want the new form of WORKER, so get in line and contribute short, spicy letters each month, and let the good work go on.

#### CHARTERS GRANTED IN MARCH.

No. 361, Lawrence, Kans.  
No. 305, Fort Wayne, Ind.  
No. 378, Sheffield, Ala.  
No. 182, La Cananea, Sonora, Mexico.  
No. 189, Chester, Pa.  
No. 298, Findlay, Ohio.  
No. 289, Santa Cruz, Cal.  
No. 317, Hopkinsville, Ky.  
No. 377, Lynn, Mass.

#### NOTICE.

All members are requested to stay away from Buffalo on account of difficulty we are having with the Contractors' Association. Business at present is exceptionally dull in the building trades, and we shall be obliged to live up to section 8, article 14, of constitution.

#### TOLEDO TRADE.

Work is very scarce at present. Several good card men idle, and from best information obtainable the prospects are not very bright. We are gaining occasionally but there are a great many working that need to be looked after.

#### ONE OF THE NEW LOCALS.

Local No. 459 was installed on February 21st with a membership of ten. We have made a gain and now have eighteen, which we think is not bad for a town of this size.

There is nothing doing here at present, and several of our men are idle.

The Home Tel. Co. built the town here three years ago and these lines are in good condition. They are doing no work now except a few extensions.

WM. MCGORY.

Cortland, N. Y., March 30, 1904.

#### LEAVE LAFAYETTE OFF YOUR ROUTE.

Brother Allman, G. V. P., was with us last week, and tried very hard to get a settlement with the Lafayette Telephone Company, of this city, but he did not succeed, although I can assure the brothers that it was no fault of his.

I would ask that all linemen stay away from Lafayette, as the Lafayette Telephone Company is on the unfair list, and is likely to be so for some time. I especially request that all cablemen stay away, as this company is trying very hard to get a cableman.

F. E. WILLIAMS, President.

Local Union No. 222.

#### INFORMATION WANTED.

Any one knowing the whereabouts of W. J. Hart, a lineman, formerly of Madison, Wis., will please notify the secretary of Local No. 159.

Any of the brothers knowing the whereabouts of Daniel P. Shattuck (last heard from was working in Auburn, and boarding at the Cottage Hotel), kindly inform his wife, Mrs. D. P. Shattuck, 72 Sophia Street, Rochester, N. Y.

Will Brother G. S. Nunemaker write to Brother O. P. Stoey, 432 Market Street, Harrisburg, Pa., as he has something of importance to tell him.

If this meets the eye of Brother Fred D. Cappleman, or any one knowing his whereabouts, please communicate with A.

C. Brueckmann, F. S., Local 88, Savannah, Ga.

Any information concerning the whereabouts of F. W. Eckert (Fuzzy), a line-man, will be gratefully appreciated by his mother and brother. Address, John D. Eckert, No. 411 Bates Street, Logansport, Ind.

Any brother knowing the present address of Brothers John Brady and Jack Standish, please send the same to Local 143, and oblige.

H. J. WILLIAMS, P. S.

Any information regarding the present address of Wm. Cook (better known through southeastern states as "Toothless Billy"), will be gratefully received by G. D. Marmon, 238 No. Pearl Street, Albany, N. Y.

Any one knowing the whereabouts of Ernest L. Winkler will confer a favor by telling him to write to his mother, as there is an estate to be settled. Any information as to where he is will be gratefully received by C. A. Ellstrom, Recording Secretary, No. 407, Marquette, Mich.

## Reports From Grand Officers

### Grand President.

The trouble that existed among our locals in New York City was settled in a very amicable way at a meeting of committees representing Locals Nos. 3, 20, 270 and 438, held on Sunday, March 6, which D. V. P. Sweek and I attended.

It was the same old story over again. Each local held the opinion that the other was trying to put it out of business, until they met and talked matters over in a brotherly and business-like way, when they discovered it was a case of misunderstanding, brought about by the locals not creating and maintaining the proper relations.

It was demonstrated beyond a shadow of a doubt at the above meeting that the interests of the electrical workers can be taken better care of through unity of action on the part of all locals in each city. Our weaker locals can be strengthened by the assistance of the stronger, our trade rights protected against those that are endeavoring to steal them from us.

I hope to see the day when our locals in every city in the country will form councils, for their mutual protection and benefit.

Nine-tenths of the dissensions that exist among our locals are caused by personal feelings on the part of indiscreet brothers, who do not stop to think or investigate before arriving at conclusions. We should leave personal feelings aside when it comes

to business matters, no matter how large or how small they may be, and realize our cause is a mutual one, regardless of whether we are inside electrical workers, shop men or outside electrical workers.

Each committee is to be commended for the brotherly spirit displayed by them at the conference, as they acted very fair on all matters.

I arrived in Philadelphia on the 8th and addressed meetings of the following locals: No. 98, on the 8th; No. 287, on the 9th; No. 240, on the 10th; No. 21, on the 11th; No. 299, of Camden, N. J., on the 12th; No. 210, on the morning of the 13th, and No. 211 in the afternoon of the 13th. The latter local is just existing, only a quorum showing up.

I gave them advice as to what I thought was the best policy to pursue under the circumstances, which they promised to follow.

I found the other locals in the vicinity of Philadelphia doing fairly well.

On the 11th I went to Chester, Pa., with Brother Meade, of Local No. 98, for the purpose of organizing a local there. D. V. P. Allman could not get there for a long time and things were just ripe for business. Brother Meade introduced me to several electrical workers and I arranged a meeting for the 14th. On that date I was on hand and succeeded in getting enough signers for a charter. Locals Nos. 21 and 98

rendered me great assistance in placing the local in that city. As it was impossible for me to be on hand to install the new local on the 23d, I delegated Brothers Meade, of Local No. 98, and Collier, of Local No. 21, to do the honors. On the 15th I was at No. 98's meeting again, which was addressed by P. J. McGuire, J. Faggaler, and yours truly.

The movement has taken a change for the good in that city at last. The building trades are on the verge of uniting in one strong council.

This will mean, if brought about, the solution of the long-standing difficulties existing there among various building trades. I arrived at the general office on the 16th.

I went to Annapolis on the 20th to meet the officers of Local No. 448 in regards to unionizing a large construction job in that city, which has recently been secured by a large contracting firm doing business in "New York City," "Paterson, N. J.," and "Baltimore, Md."

After conferring with the officers of the local an agreement was drawn up, which was satisfactory to them. On the 22d we met Brother Duke, of Local No. 3, who represented the firm. I am pleased to state through his good offices the agreement was accepted.

It calls for a minimum wage scale of \$3.20 per day of eight hours, time and one-half for overtime, double time for Sundays and holidays, none but members of the I. B. E. W. in good standing to be employed, etc. Considering that Local No. 448 is scarcely six months old, the agreement is a very good one.

On the 27th I left Washington for New-ark, N. J., as Local No. 87 had informed me that the New York and New Jersey Telephone Company was discriminating against our members to the extent of discharging them as soon as they found out they were union men, or if a man made application to join he was told if he joined it meant his job. I called on Brother McDonald, who informed me that the local desired me to see the company in regard to the matter. I called on Mr. Backus, of the company, who informed me that such was not the case, as the company did not care if an employe belonged to a union

or not, so long as he did his work properly. He promised to investigate the cases I placed before him.

On the 28th I met a committee of the shopmen that I reported last month had desired to join Local No. 270 at a meeting I addressed in New York City.

They succeeded in getting an increase in salary all around that afternoon, after a long conference with the officials of the company.

I called on the president of Local No. 190 about some ex-members of that local that wanted to join Local No. 270. I arrived in Buffalo on the 30th and met D. V. P. Sweek. Since my last letter Local No. 41 has signed an agreement with the Contractors' Association of Buffalo.

It called for the indorsement of the Grand President and Grand Secretary.

It is of such a nature that I refused point blank to sign it under any circumstances unless certain sections of it were eliminated. It would not be good policy to publish it in this month's WORKER, as there is a chance of it being amended, so as not to conflict with the constitution and principles of our Brotherhood. I will state, however, the local would be much better without any agreement at all than to have one such as it is. I left Buffalo on the 1st and arrived in this city on the 2d. My mission to this city is to try and bring about harmony among some of our locals here.

I am of the opinion that a good deal of the trouble arises from the fact that we have too many locals in this city. Less than half the number would be sufficient to cover the territory with much better success.

F. J. McNULTY.

Chicago, April 2, 1904.

#### First Vice-President.

In last month's report I stated my intention of assisting Local No. 45 to organize the non-union men in and around Buffalo while being kept here owing to the trouble of Local No. 41, and the contractors association, but on receiving a telegram from the Grand President to come to New York, as Locals Nos. 3, 20, 438 and 270 were having trouble over jurisdiction of work, I left for there and I arrived in New York

and met the Grand President. We arranged to have a committee of the different locals involved to meet Local No. 3's executive committee on the 6th. They were all there to do business, and after discussion by No. 3's committee with the committee from each of the other locals everything was settled in fairness to all. Some of the points in dispute between Local No. 270 and No. 3 are to be acted on by a committee representing 270 and 3, also a committee of two from Locals Nos. 3, 270 and 20, are to act as a standing committee to confer with each from time to time as to assisting each other in unionizing work in their territory. While in New York I decided to see what could be done in the way of building up No. 20's membership. I am pleased to report good work was done. Brother McLaughlin, No. 20's business agent, succeeded in getting very favorable results. I visited Local No. 368 on the 9th, there being a small attendance. I gave them a talk in regard to the good of the union; also advised them to confer with No. 20 as to getting together in one local. On March 18 Local No. 270 initiated 42 new members. It fell upon me to give them instructions as to what we expected of them in the future. While in New York I attended the following meetings: No. 20, twice; No. 270, three times; No. 438, twice; No. 368, once; No. 3, twice. A great deal of the work that was done while there as to organizing I will omit from this month's report.

On account of receiving a telegram from Schenectady as to trouble in the General Electric Works, I arrived there on the 21st, and looked up the officers of Local No. 247; found what the grievance was. On account of the locals there having a district council and arbitration committee. I advised that a committee of No. 247 arrange to have a meeting with the firm and if they did not succeed in settling to take it to the district council and arbitration committee. Should that fail they were to let me know and I would take it up. That seemed to be the most sensible course to pursue for the reasons that if an executive officer be called before the local had made an effort it would appear to all as though

the local could not handle any of their own affairs; thereby losing the confidence of its own members. The 22d I received a telegram that there was dissatisfaction among the members of Local No. 41 of Buffalo on account of their pending agreement with the Contractors' Association. I arrived at No. 41's meeting, looked over the situation, and decided to send for the Grand President. When he arrived we arranged to have a meeting with the employers to go over the agreement and make changes satisfactory to both, as there are clauses that are contrary to the international constitution and must be changed before the Grand President and Grand Vice President can sign them. During my time in Buffalo I am assisting in getting Local No. 45 more thoroughly organized, Brother James Shane being appointed temporary business agent, but I believe the local will see the necessity of continuing some one in the field all the time. From here I shall do some work for Local No. 58 of Niagara Falls. I hope the locals I have as yet not visited will not think they are being overlooked, as I will get to them as soon as I possibly can.

F. J. SWEET.

#### Second Vice-President.

I herewith beg leave to submit the following report for the month of March:

Tuesday, March 1, I left Providence at 8:40 a. m. for Pittsfield, Mass., arriving at 2:30 p. m., hunted up committee from Local No. 167 and discussed plans for the purpose of organizing the Stanley Works. Wednesday met the president of the C. L. U. and discussed matters with him. In the evening attended meeting of Local No. 167, had charter opened, and made provision to take in all delinquents. Thursday wrote and addressed fifty notices to all delinquent members, who were still in town, and arranged for a meeting with them on Saturday, the 5th. In the evening visited two locals, asking their assistance in getting those whom they knew to join our Brotherhood. Friday looked after general matters. In the evening took in meetings of the machinists and retail clerks. Saturday held meeting at 3 p. m.



in good standing, and they all made out reinstatement applications and promised they would try to induce others to join.

Sunday I went to Hartford, Conn., by call over the wire. Monday in company with Brother Owens I went to New Britain and met committee from the B. T. C. and called on Mr. Hibbard, the largest general contractor in that city, in relation to a building that was tied up, owing to scab wiremen working there. Mr. Hibbard said if all hands would return to work that none but union men would be allowed to finish the job, and on all other work that he could control nothing but union electricians would be employed. That being the best we could do, left the matter in the hands of Local No. 186. In the evening I returned to Pittsfield and attended meeting of the C. L. U. and got a committee to assist in getting after the shopmen. Tuesday hunted up names of the electric workers. The grades of men in the factory not being specified, it was a difficult matter to ascertain what branch of the industry they worked at, as S. E. M. was the only designation after the employes' names in the directory or assessors' lists.

On Wednesday I was obliged to return to Boston on some private business, and had to remain there Thursday also. I have deducted two days' pay from my salary on this account. Friday kept after the shopmen and attended meeting of Local No. 267 in the evening. Saturday and part of Sunday I called at the homes of some of the shopmen and they being so anxious to know about the conditions of Schenectady I took the 2:30 train in the afternoon for that city. Getting there in the evening, I was obliged to wait over Monday to get the necessary information, and attended meeting of the Machine Builders' Council. Tuesday I returned to Pittsfield and hunted up the names of the shopmen, following that same line of work. Wednesday and Thursday addressed a large number of notices for a meeting on Saturday. Friday, having received a call to come to Waterbury, Conn., I went there, but sorry to say after all the efforts used by the members of Local No. 11 and myself, delinquents failed to show up, and come to terms, Local No. 11 being willing to

divide the funds and have two separate locals. Saturday returned to Pittsfield and held meeting in the afternoon, which was not a success, as only four persons who were former members, put in an appearance. On Monday sent out 100 more notices for meeting on Wednesday evening. On Tuesday went to North Adams and chased up the linemen of that city. There being but seven, held meeting that evening at the hotel, and succeeded in getting four out of the seven, and the balance promised to join very shortly. I returned to Pittsfield on Wednesday and held meeting in Bartenders' Hall for the shopmen, but after trying every way possible to bring them together, they failed to attend. On Thursday I went to Dalton after some more linemen, as I chased up the linemen in that vicinity during my spare time. I called a meeting for them on Friday evening, and out of the fourteen linemen I had seen ten came to the hall, and they all joined Local No. 264. On Saturday I collected money for the local and attended to other matters. On Monday I came to Worcester and tackled the linemen in that city, held open meeting in the rooms of Local No. 96, and succeeded in getting 29 new members. Tuesday came to Lynn and made arrangements to organize a new inside men's local and initiate and install officers on the 1st of April. In the evening attended meeting of Local No. 259 of Salm. The members there were a little dissatisfied owing to new charter being granted to Lynn, but I can safely say the Lynn local will be a great benefit to the city of Salem, and is bound to have success, as they affiliate with one of the best building trades councils in my district. On Wednesday I had a call over the wire to come to Boston in behalf of Local No. 103, which was in difficulty with the Fixture Hangers in that city. The Board of Governors of the Structural Trades Alliance had undertaken the proposition to straighten out the tangle on trade jurisdiction lines. Our side was ably defended and I must say there is a great deal of bitterness in the ranks of both organizations. Local No. 103 for some time has suffered at the hands of the fixture men, and we have tried every way possible to

adjust matters in the past, and bring about a peaceful settlement, but it has all been in vain. I still believe matters can be adjusted, and urged our organization to act wisely and conservatively and not create any further strife. Sometimes a small point won will react and cause considerable friction. It will be a hard matter to tell how the whole thing will end, as the matter is now in the hands of the A. F. of L. for adjustment. I hope our Grand President and Secretary will use their best endeavors to bring about a speedy settlement. I would be pleased to be at that meeting in behalf of Local No. 103 and show the executive board of the A. F. of L. how wrongly and unjustly we have been treated at the hands of the Fixture Hangers in this city.

On Thursday I came to Lowell, and it will be but a short time until I have a new local going here. I have done my best to get the shopmen started, but have failed in my effort. I do not believe it is possible to get this branch of the industry organized unless the method is pursued that I recommended in my last month's report. I wish to thank all those who assisted me in Pittsfield. I do not believe our work was all in vain, and know the time will yet come when they shall knock on the door for admittance. I shall now devote my time to the linemen and wiremen, and I believe good results will be accomplished. The linemen in particular need the most attention in this district, and all hands must now pull together. Several have been added to the rolls this month, and they are bound to come stronger from now on. Business is terribly dull in my district, and the severe cold weather has only set the building industry further behind. The Hartford boys are out now four months, and are just as full of fight as ever. They certainly are deserving of all the financial assistance that can be spared. They are a determined body of men and are bound to win if a little support is given to them. My prayer and hearty wish is God speed them to a grand victory.

E. T. MALLORY.

### Third Vice-President.

On closing my last report was in Fort Wayne, Ind. Left there morning of 1st, going to Peru, Ind. Find No. 347 in good condition; also one of their members, Brother Odum, is mayor of city, and is helping local in every way possible to make it a success.

Went from Peru to Kokomo and found No. 322 doing good work, but some of the brothers do not attend meeting as they should. Also found a couple of ex-brothers in this city who were willing to fix up and have since investigated both cases and can't find their names on books or where they came from and have notified the President of No. 322 to take them in as new members; also wrote a letter to each one telling them to make application as new members.

From Kokomo I went to Logansport. Found No. 209 in good condition. All men working at the business are members and keep on the lookout for any one going to work to see that he has a card. They initiated a new member the night I attended their meeting.

Went from Logansport to Anderson and found No. 147 in good condition, but have a strike on against C. U. Tel. Co. Attended meeting, made arrangements with committee to accompany me and call on manager of Telegraph Company to try for a satisfactory agreement. With the committee I called on manager of company and went over the case from the time trouble first started up to the present time and after a long drawn out meeting arrived at a satisfactory agreement to the manager of the company in Anderson, but would have to be O. K'd by the head officials at Indianapolis.

From Anderson I went to Fort Wayne where I had a new local of inside men to install. In this I was assisted by some of the brothers of No. 260 and No. 138, and wish to extend thanks for same.

While in Fort Wayne I received letters and telegrams asking me to be in Cleveland on the next day to look out for electrical workers' end in regard to electric work in and around the docks at Ash-

tabula, Buffalo and Cleveland; arrived at Cleveland and attended the meeting of No. 38, had a good attendance; all members were wide awake, taking an active part in all business brought before their body.

Was called upon to say a few words and did the best I could to let them know the conditions as I find them and how we should proceed to improve them.

The next morning I met Brother Eckler of No. 143, Brother Sullivan of No. 39, Brother Estinghausen of No. 38, and went around to find the convention of Longshoremen, but after considerable walking and inquiring found they did not meet until the 21st of the month.

I then made arrangements with Brother Sullivan and Estinghausen to assist Brother Eckler of No. 143 in trying to get electrical work on the docks for the members of I. B. E. W. without having to belong to the Longshoremen's organization.

The next night I attended a meeting of No. 39 and found them a good hustling body not afraid to express their opinion on every question brought up for discussion. Was asked to say a few words on the good of union and expressed my views on why we should try to improve and build up the I. B. E. W. In Cleveland at the present time have a few outside and inside men idle, but as soon as weather opens up there will be work for all.

From Cleveland I went to Pittsburg as my sister was very sick. I stayed in Pittsburg until Sunday night and while there attended a meeting of No. 5; also met a gang of Western Union men and talked to each one. Found that some were ex-members, some three months or more in arrears, while others never did belong, and one that was paid up. After quite a long talk the men that were in arrears promised to pay up and three that never belonged said they would join on the first of the month. I then notified the business agent of No. 14 to keep after these men.

From Pittsburg I went to Indianapolis to call on Mr. Whitney who is manager for the C. U. Tel. Co. for the state of Indiana, and had a three hours' interview

with him trying to have their company employ nothing but card men; also about trouble at Anderson. He had no objection to men working for his company belonging to the union, and says he would prefer card men, but would not sign to employ none but card men.

I then went to Lafayette, Ind., to try for a settlement with No. 222 and the Independent Tel. Co. I called on the manager, but he would not talk on the subject unless I had some one else there. He asked me to call in the morning, which I did, and found the manager was not in, but had left word where I could find him. Went to the place and found the manager, one of the directors and a large stockholder, but they would stand for nothing but an "open shop" as they were members of the Employers' Association, and to this I could not agree. I then visited the officers of the Central Trades Assembly and asked them to render all the assistance possible to the electrical workers, and to try and show this company that it was to their interest to employ union men.

From Lafayette I went to Anderson to attend a meeting of No. 147. I had not received any word from the manager of the Tel. Co. I then called on the manager the next morning but he had not received any reply from Mr. Whitney as to whether he could sign the agreement or not.

I then had a talk with the men employed by this company and found out that out of nine men only three had served three years or more, and others from seven months to one year and were drawing union wages and would have no objections to joining our organization, but we can only take them in as apprentices, for if they should get out they could not hold their end up with any other company, and this is something every local should watch when taking in new members. Investigate and be sure applicant has served required length of time, and if not take him in as a one or two-year apprentice, and see that his card is marked as it should be and not take a member in as a one-year apprentice and next week get a traveling

card marked "lineman." He then goes to some other city and can't hold his end up and gets a hard name for the I. B. E. W.

I went from Anderson to Terre Haute to attend the State Federation of Electrical Workers. They had a nice meeting with quite a few locals represented. I would like to hear of every state having a Federation of its own and every local in each state having delegates at each meeting as it would be the means of placing before each local the conditions all over the state; also wages paid and hours worked. By having a meeting every six months and having a report from each local it would give the smaller and weaker locals courage. It would also be instructive to all as to the best way to proceed to get conditions in one city as good as another. I was in Terre Haute until the regular meeting of No. 25 Tuesday night, and found work not any too good, but most all the brothers are working. The Light Co. and Street Car Co. are on the unfair list of the A. F. of L. The same was put on by the street car men's organization on account of a strike some two or more years ago and which has been lost long ago, but as this local of street car men is still holding a charter it cannot very well be declared a fair job. I have written Brother Sherman asking him to investigate and see if something cannot be done to have this company taken off the unfair list as it would give us a chance to get card men jobs with this company.

From Terre Haute I went to Sullivan and found No. 219 not a very large local, but have all men working at the business, so this is all we can expect.

From Sullivan I went to Mt. Vernon and found No. 418 doing business with all men in that city carrying cards.

Went from Mt. Vernon to Evansville to attend a meeting of No. 16, and found the Tel. Co. employing all card men. The Light Co., open job, and inside contractors all have an agreement signed up with No. 16, but one firm; called upon him with Business Agent of Central Trades who is a member of No. 16. I will not say with any positive assurance

but think had him about to do business when I was called to Pittsburg by the sudden death of my sister, but before leaving left word that I would be back in a week or so when I hope to be able to effect a settlement. In my travels I did not visit No. 324, of Brazil, as most all their members were at Federation meeting in Terre Haute, but they informed me that everything was running smoothly in their city.

Another thing, I would like to notify all cable splicers to keep away from the Independent Tel. Co. in Lafayette, Ind., as they are unfair.

Before closing will say that some of the locals have asked me why an itemized statement of the expense account of each G. V. P. is not published in the ELECTRICAL WORKER. Now that is something for Grand Secretary Sherman, but will say I have written him a letter saying that I would like to have mine published, and do not think any other one of the G. V. P. would object, as it is something every brother has a right to know. I also wish to say that the expense of my trip from Cleveland to Pittsburg and back to Cleveland was not paid by the I. B. E. W., but by myself.

I went to a meeting of No. 14 last night. They had a good attendance and a great amount of business was done, the most important being that about the trouble they have been having with the P. & A. Tel. Co., and think by this time next week will have arrived at a satisfactory settlement.

E. P. ALLMAN.

April 1, 1904.

#### Fourth Vice-President.

I herewith submit the following report for the month of March:

On March 1st I installed Local No. 391, in Meridian, Miss.

March 2nd I went to Birmingham, Ala., and found that they had held three meetings for colored linemen, and could do nothing with them, so I invited them to an open meeting and only one man came, then I gave written invitations and held another meeting, and still no one came,

(Continued on page 50.)



## DEVELOPING A BIG WATER POWER

BY J. E. PRICE

THE long talked of, long hoped for enterprise of using the Great Falls of the Potomac River for furnishing electric power seems to be nearer realization now than ever before. From a recent talk between an official of a big railway company in the District of Columbia and the writer, it was learned that the Great Falls Power Company were working at the problem of

machinery in Washington and its suburbs. A number of estimates have been made concerning the available power of these falls, one of which was by the engineer department of the War Department, and two other private concerns. One of the latter stated that 40,000 horsepower was obtainable from this source, and that by use of a dam located above the falls, and



GREAT FALLS OF THE POTOMAC

utilizing the falls power for furnishing this to any person or corporation in the District. Plans in these particulars have not yet been fully decided upon, but the writer has been assured that the enterprise will materialize in good shape, and that its scope will be greater than heretofore believed by the public.

As to the possibility of using Great Falls for electric motor force there is no doubt at all; the power is there, and all that is necessary is to put in the plant and make connections with moving and stationary

thus making an extensive reservoir, more power could be gotten and maintained.

It was also stated that all electric cars in the District could be operated and lighted by power from the falls. Of course, from above statement, this goes without saying. It may be said here that there are in the District (in Washington and running therefrom) twelve electrically operated railway systems having an aggregate track mileage—double and single track—of nearly eighty miles. The cars employed number about five hundred. And this aggregate will soon

be added to—when the Old Dominion and Great Falls railway is completed. This road has been having some trouble concerning its cross-town line, from the Aqueduct Bridge east; but work on its suburban portion is going on, and whether or not the cross-town idea is carried out, it will at least be run from the Virginia end of the Aqueduct Bridge to Great Falls. The line runs from the bridge to a distance of three miles into Virginia, thence up river to the dam above the falls. Here the company owns a large tract of land; and when the road is completed a hotel will be built for the accommodation of visitors. It is proposed to make a pleasure resort at the falls; and from the beauty, and other attractions of the place, there is a possibility of drawing there considerable numbers of people. The projectors of the Old Dominion railway, at least, are of this opinion.

As mentioned there have been a number of estimates made concerning the possible power output of Great Falls. Some years ago the War Department took up the matter with a view to the utilization of this force for lighting with electricity the public building and grounds and streets of Washington. After investigating the matter the conclusion was reached, that the idea was entirely feasible—but, for reasons unknown to the public, the project was dropped.

The War Department's estimate of the falls' power was very conservative—perhaps too much so, for it falls far short of one made before the Government became interested in the matter, and of others since then. The available power from a series of turbines at Great Falls, at the lowest stage of the Potomac River, was put at 6,395 horse. At certain stages of the river over 10,000 horsepower could be had, but the aggregate maximum was put at 8,648 horse, obtained by using a dam, storage reservoir.

For lighting the public buildings, etc., the Government's estimate was based on the use of 36,583 incandescent 16-candle electric lamps and 3,311 arc lamps. But, at present, the number of electric lamps in use in Washington is far in excess of these figures. When the report cited here was made, it was stated that the number of

electric lights then employed in this city had doubled in the past fourteen years, and that as the increase continued a time would arrive when the available water power of the Great Falls would not be sufficient for lighting all the streets and public buildings and grounds. Therefore, in view of this contingency, the employment of steam engines for auxiliary power was suggested.

This was the Government's way of looking at the matter. But the private citizen comes with the estimate of more than 40,000 horsepower from Great Falls, as mentioned; and if we strike an average from all the estimates, perhaps 25,000 horsepower is about the right value.

The Government's plan for the power plant at Great Falls was, as set down in report, as follows: "Vertical turbines directly coupled to comparatively low-tension alternating current generators. The potential of the current to be raised by transformers to 10,000 volts and sent by aerial line to the city limits and thence to a convenient distributing station in Washington by underground cables, and there utilized to actuate polyphase motors. These motors to be mounted on shafts to which shall be coupled armatures of direct current dynamos, each generating unit to be for 100 or 125 lights."

The hydraulic plant was to cost \$64,000 (the estimate was for 12,800 h. p.), and the whole outfit, including the electric plant, to cost \$109,710; buildings, lines, etc., were to be put in operation at an expense of \$3,764,930. The cost of operating the plant was put at \$52.33 for one arc light per annum.

The Little Falls of the Potomac were also considered by the War Department engineers, but the power there was found to be too inconstant for practical purposes. These falls are situated near Chain Bridge, 4 1-2 miles above Washington. The fall of water is about 35 feet in a distance of 1 3-4 miles.

The Great Falls is a series of rapids in the river, extending about 2,000 feet, in the course of which the river falls about 76 feet. They are fourteen miles northwest of Washington, and at their head is located the dam of the Washington Aqueduct, 2,877 feet long, extending across the river from the Maryland to the Virginia

shore. From a point on the Maryland side of the river, and just above the dam, leads the aqueduct, the upper portions of which are mostly in tunnel.

Utilizing the Great Falls for furnishing power is something which has deeply interested a number of enterprising people. The late Benjamin F. Butler was one of these; and if matters in this particular had moved as General Butler desired, no doubt a manufacturing town would now be doing good business at the falls. About the time he was studying out this project some data of interest concerning the falls' power, &c., was gathered. Let us quote in this connection:

"The greatest amount of power is concentrated at the Great Falls where the river is nearly half a mile wide and is divided by a chain of islands located near its center, thereby giving two currents \* \* \* \* the Virginia channel being the main stream. At this point within the limits of the property owned by the Great Falls Manufacturing Company, we have about 85 feet available fall with a flow of 2,100 cubic feet per second, which, uninterrupted, is equal to 13,000 horsepower, and sufficient to run 20,000 looms, aggregating 900,000 spindles, together with machinery for other branches of manufactures. \* \* \* \* As there is a continuous declivity of over 250 feet from Harper's Ferry down to the Great Falls, it is possible to fit up one or more immense basins or reservoirs in one or more of the valleys above wherein a sufficiency of the surplus flow may be turned, thereby perpetuating all necessary power the year round."

The "Great Falls Manufacturing Company" owned 900 acres, out of which it was intended to reserve 700 for founding the new town; 200 acres were to be used for mill purposes. And here a fine real estate scheme came in: it was proposed to sell 6,000 lots at \$100 each and thus obtain \$600,000, a good starter for the enterprise.

Really—from the opinions of the projectors of this town and manufacturing industry—few places seemed to offer better opportunities for money-making than the Great Falls neighborhood. And the natural advantages—see this:

"In regard to building and other material, ample supplies of superb marble and

granite, and choice seneca or sand, blue and other building and paving stone, as well as brick and fire-clay and cement, abound at and in the vicinity of Great Falls. And at and around the falls and along the canal there is no lack of various kinds of timber, for home consumption and foreign markets. Gold has been discovered to exist at this point, but as yet, not sufficient to authorize working some of the veins."

From recent developments it seems that the Great Falls' country is attracting some attention in the gold line. Its "gold fields" are being prospected and a 150-foot shaft has already been sunk, bringing fair results. It is said there is a long belt of gold running through the District of Columbia; and this is the belt tapped by the Great Falls miners. There is also a long belt of greenbacks running through the Capital, got by tapping Uncle Sam's veins.

#### LOCALIZED WIRELESS TELEGRAPHY.

The Italian maritime authorities have been making experiments with Alessandro Artom's method of localizing or sending wireless messages in a determinate direction, with reported success. It is also stated that this system will be used by Marconi in communicating from Italy to Argentine, for which a station is now being built at Pisa.

Artom's method of localizing consists essentially in employing circularly or elliptically polarized Hertzian waves which can be transmitted through space in a predeterminate direction. Electromagnetic waves may be polarized in this way by combining two sets of waves polarized in planes at right angles to each other. They may also be obtained by passing ordinary waves through prisms of wood or metal grids, although this plan involves a serious loss of energy through absorption. Artom uses the first method in his system. He produces two oscillatory charges of different phase and of different directions, by means of three or four spark balls. In the circuit containing the induction coil producing the sparks there is a Wehnelt interrupter. The terminals of the secondary are connected as usual to a pair of spark balls, but there is a third ball placed so, as to form a triangle with the other two, and

this is connected through an inductance or a condenser to one terminal of the secondary circuit. The balls are arranged as the vertices of the right-angled triangle. The aerial may be connected directly through a transformer with the third or central ball. Three or four aeriels may be used, and they can be vertical or else placed in a given direction. The receiving aerial may be a large circular wire connected at two points to the coherer. This system is said to allow the height of the aeriels to be reduced and to aid in syntonization.

#### UNDERGROUND CABLES IN BALTIMORE FIRE.

A writer in *Electricity* says: The Baltimore fire has been the unfortunate means of settling many disputed points for the engineers of this country, and it has, among other points, emphasized most forcibly, in the minds of disinterested observers, the superiority of underground cables for electrical transmission of power as compared with old overhead methods.

The Standard Underground Cable Company has installed during the past few years in Baltimore many miles of underground cable, in the municipal subway for the Western Union and Baltimore & Ohio Telegraph Companies, the Maryland Telephone Company, the city fire and police departments and the United Railways & Electric Company. The main conduit lines run the entire length of the burned district and the manhole covers were in many cases covered with piles of hot brick and stone to a depth of 20 feet.

In spite of the intense heat there is so far as is known not a single instance of trouble on the cables in manholes or subway except where exposed ends of cables were destroyed by the fire, and the cable system is in perfect condition to-day.

Two three-conductor cables installed for the United Railways & Electric Company over a year ago, and which terminated in the new and unburned portion of the Pratt street power house, extended the entire length of the burned district, and were carrying current to the substation at 13,000 volts, the second day after the fire, without any interruption to service.

This record compared with the ruin of

overhead construction which was universal certainly gives food for thought to all users of wire.

#### BEFORE IT IS TOO LATE.

If you have a gray-haired mother,  
In the old home far away,  
Sit down and write the letter  
You put off day by day.  
Don't wait until her tired steps  
Reach heaven's pearly gate,  
But show her that you think of her  
Before it is too late.

If you've a tender message,  
Or a loving word to say,  
Don't wait till you forget it,  
But whisper it to-day.  
Who knows what bitter memories  
May haunt you if you wait?  
So make your loved one happy  
Before it is too late.

We live but in the present,  
The future is unknown;  
To-morrow is a mystery,  
To-day is all our own.  
The chance that fortune leads to us  
May vanish while we wait,  
So spend your life's rich pleasure  
Before it is too late.

The tender word unspoken,  
The letters never sent,  
The long-forgotten messages,  
The wealth of love unspent,  
For these some hearts are breaking,  
For these some loved ones wait;  
So show them that you care for them  
Before it is too late.

#### DIPLOMATIC SERVICE.

"This ring," said the jeweler, "will cost you \$50, with our extra service gratis."

"What is your 'extra service?'" asked the young man who was looking at engagement rings.

"When the young lady calls to make inquiries we'll tell her it's worth \$150."—*Philadelphia Public Ledger*.

Less than 3,000,000 of Russia's 131,000,000 inhabitants are industrially employed, and the greater part of their work is on government orders.



**ELECTRIC POWER FOR RAILWAYS.**

In the first part of this paper is given a brief review of some of the pioneer work in electric railroading, showing the development of electrical apparatus as measured by the increase in confidence manifested by railway engineers and capitalists. In view of the recent contract between the New York Central and the General Electric companies for eight 5,000-kilowatt generators and thirty 2,200-horse-power locomotives, it is safe to say that electrical apparatus is now considered quite as reliable as the old reciprocating engine.

Electric power began to take the place of horses for hauling street cars about the year 1888. The West End Street Railway Company, of Boston, did some of the early experimental work. In 1889 this company began the construction of the great West End power station which was then planned to be equipped with ten triple expansion Corliss engines of 1,000 horse-power each and forty belt-driven 200-kilowatt four-pole Thomson-Houston generators. Later plans called for thirteen engines and fifty-two generators.

The construction of the West End power station in Boston was the beginning of five years of great prosperity and progress in electric street railway work. In 1895 electric cars began to replace existing cable cars on street railways and steam locomotives on elevated roads. The Metropolitan West Side Elevated Railroad in Chicago, equipped with General Electric apparatus, began running trains in May, 1895. This was the first commercial electric elevated road in the United States. In June of the same year the Baltimore & Ohio Railroad Company began hauling trains through a tunnel under the city of Baltimore with an electric locomotive weighing ninety-five tons and equipped with four gearless motors of 360 horse-power each. The voltage of the system was between six and seven hundred. The total length of line electrically equipped was about three miles.

This year also marked the completion of the first of the 5,000-horse-power alternating-current generators in the Niagara Falls plant. These machines were not designed expressly for railway work, but they represent the beginning, on a large scale, of the generating of alternating-current power for

railways. In 1896 the New York, New Haven & Hartford Railroad Company began operating some of its lines with electric power, in order to regain the traffic which had been taken from it by the electric interurban roads in its territory.

In 1898 the Sprague multiple unit system was put in operation on the South Side Elevated Railroad, thus completing the substitution of electricity for steam on all the elevated roads in Chicago.

The principal pioneer work of the past six years has been along the line of poly-phase alternating-current central power plants for supplying power through sub-stations to the standard direct-current motor equipment of electric railways. Three magnificent examples of this work have been designed to meet the transportation problems in New York city.

The first of these was the Metropolitan Street Railway Company's power station. This company operates all the surface cars on Manhattan Island, an area about ten miles long by two miles wide. The station equipment consists of eleven 3,500-kilowatt General Electric generators having an overload capacity of thirty-three and one-third per cent. Each machine is direct-coupled to a Reynolds-Corliss vertical cross-compound engine, and generates three-phase currents at a pressure of 6,600 volts. Power is transmitted at 6,600 volts from the one central station to the substations which are distributed over Manhattan Island from a mile and one-half to three miles apart. The sub-stations are equipped with 1,000-kilowatt rotary converters, each converter receiving alternating current from three step-down transformers. The rotary converters supply direct current to the 500-volt feeder system. There is also a storage battery whose current capacity is about one-fourth the total capacity of the rotary converters in each sub-station.

The second notable piece of pioneer work, on a large scale, in New York city was the electrical equipment of the Manhattan Elevated Railroad. This system was put in operation only a little over a year ago. The power station was then the largest steam-driven electric generating plant in the world. The first electric trains were run over the road in January, 1902, and the complete change from steam locomotives

to electric motors required about one year. The power stations, consisting of eight units, has a total capacity of 80,000 horse-power. Each unit consists of a 5,000-kilowatt Westinghouse three-phase alternator directly connected to a pair of cross-compound Reynolds-Corlis engines. Each generator has a safe overload capacity of fifty per cent. and delivers 10,000 horse-power at 11,000 volts to the high-tension cables during the periods of maximum daily load. One hundred and twenty-five miles of these 11,000-volt cables distribute the power to seven substations.

The step-down transformers and rotary converters in the substations are similar to those of the Metropolitan system, the units being about fifty per cent. larger. They supply power at 625 volts to the direct-current feeders leading to the third rail, which is used as the working conductor. There are four motor cars on each six-car train, each motor car being equipped with two General Electric motors. The eight motors on each train can be operated from either end of any motor car by the multiple unit system of train control. The cars are so arranged that the train may be cut in two in the middle, making two three-car trains with a motor car at each end of each train.

The last and most important step in the development and application of electric power for railroads, to be recorded up to the beginning of the year 1904, was the decision of the New York Central Railroad Company to equip with electric power all of its trains entering New York City. Such action by a conservative company is the greatest endorsement that could be placed upon the reliability of electric power. The plans call for a power station equipment consisting of eight 5,000-kilowatt steam turbine-driven generating units. This is equal to the power equipment of the Manhattan Elevated. The distributing system will also be similar to the Manhattan, and the locomotives are to be equipped with the multiple unit system of control so that two locomotives controlled by one man may be used on one train when desired.

The selection of the steam turbine as a prime mover instead of the reciprocating engine was justified by the results obtained in Chicago during the past five months. The performance of the 5,000-kilowatt turbine

generator on the regular incandescent lighting load of the Chicago Edison Company has put the steam turbine beyond the experimental stage. This machine generates three-phase currents at 9,000 volts. It has the same nominal rating 5,000-kilowatts as the Manhattan alternator. The total weight of the steam turbine and alternating-current generator combined is about 200 tons and only about eight per cent. more than the revolving field alone of one of the Manhattan alternators, or a little over half the weight of the Manhattan alternator complete exclusive of the engine.

There have been during the past year many other noteworthy developments in electric railway work, especially in the successful operation of alternating-current motors. This work has been of an experimental nature, no large amounts of capital being involved, but the experiments have proved successful and it is probable that the single-phase alternating-current railway motor will soon come into quite general use in this country.

There are in more or less general use at the present time four systems of electrical distribution of power for railways: first, the standard 500-volt direct-current system, using direct-current equipment exclusively; second, the rotary converter substation system, using alternating-current generators and direct-current motors; third, the booster system, consisting of standard direct-current generators and motors having in addition a special series-wound generator connected in series with one or more feeders supplying the more distant portions of the trolley line; fourth, the alternating-current system, using no direct-current apparatus whatever.

Probably the best example of the standard direct-current system in this country is the plant of the Boston Elevated Railway Company. This company operates all of the electric railways in the city of Boston with eight direct-current power stations. These eight stations have a total power output approximately equal to that of the Metropolitan alternating-current station in New York city, and they are distributed throughout the city in very much the same way as the Metropolitan substations. New York is committed to the alternating-current generating system, Boston is quite as

consistently standing by the direct-current system, and Chicago is waiting for the politicians and capitalists to settle the franchise problem. It is a question whether the rotary converter substation system in New York is any better adapted to the needs of the city service than Boston's direct-current system.

Where interurban roads are to be operated in connection with city lines, the rotary converter substation system has the advantage because the same standard apparatus can be used throughout the entire system.

Most of the large cities have both alternating and direct-current generating stations. The direct-current stations supply the heavy city lines, while the alternating-current stations supply the interurban lines and with the city substations act as auxiliaries to the direct-current stations.

In a standard direct-current distribution system the amount of power wasted in the transmission line is often twenty or thirty per cent. and sometimes even as much as fifty per cent.

The efficiency of the transmission and transformations between the alternating-current bus-bars of the New York Metropolitan power station and the direct-current bus-bars of one of the substations is between ninety and ninety-one per cent.

The booster system, often used as an auxiliary in a small city plant where the standard 500-volt direct-current system is not equal to the transmission requirements of one or more light suburban lines, has a rather low operating efficiency, for it is designed so that about 100 per cent. of the power generated by the booster shall be wasted in the transmission line. Nevertheless, the booster system is often the most economical method of supplying power to a few suburban cars five or ten miles from the power station, especially when the traffic conditions call for its use for only a few hours at a time or only a few weeks during the year.

Where the power required by such a suburban road is too large to be economically handled by a booster system, the best method of meeting the demand is to install in the power station a standard rotary converter to be operated as an inverted converter.

Among the most promising systems using alternating-current apparatus exclusively, may be mentioned the following: the three-phase induction motor system recently used in Germany in obtaining speeds above 130 miles per hour, the Arnold single-phase induction motor system, and the system which is to be tried on the Washington, Baltimore & Annapolis Railway, using a single-phase series-wound commutator motor.—B. S. Lanphear, in *Electrical Review*.

#### **AUTOMATIC PUMP OF MOST AMAZING CAPACITIES.**

Mr. P. V. De Graw, of the Eastern Press Bureau of the World's Fair, is in receipt of advices that a most unique and universally useful invention will make its first appearance before the public in the Palace of Machinery at St. Louis. It is claimed for this wonder of the twentieth century that it will be a boon of inestimable value to farmers, city folks, manufacturers generally, oil producers, railroads, breweries, miners, in fact, to every one engaged in lifting and distributing water, and perhaps greatest of all, to the cultivators of land and raisers of stock in the arid regions, as through its use water may be drawn and distributed at will either by clockwork, electricity, or hand power.

The invention is known as the Deis pump. It is compact—about four feet high by probably three feet in circumference—but its size is apparently no indication of its greatness from the viewpoint of general utility. The pump is to be manufactured in three standard styles.

No. 1 will be arranged so that it may be readily wound in two or three minutes to run six or eight hours. This pump may be attached to the windmill devices now so generally used, thus obviating the necessity of waiting for wind in order to secure force for lifting water. It is designed also for special use in dry regions for irrigating lands, thus obviating losses of crops and cattle by drought.

No. 2 will be electrical in character, so equipped that it may be attached to an electric current. It will have a capacity of pumping twenty gallons per minute, and by connecting by wire a series of pumps between Washington and Philadel-

phia, for instance, all the pumping stations along the route may be operated through a motor stationed at one end of the line, thus making a saving, it is claimed, of upward of 80 per cent. in the present lifting power now employed. The No. 2 pump is also to be constructed especially heavy, so as to be utilized for similar services in operating oil wells, mines, filtration plants, breweries, and all establishments requiring heavy pumping power.

No. 3 will be a hand pump operated by the swinging of a pendulum so finely adjusted, or balanced, that it may be readily worked by a small child. A cord may be attached to the pendulum so as to work it from the house, or any given point, and by the means of a pipe line water may thus be conveyed wherever desired.

A most attractive feature of the Deis invention is claimed to be the easy purchase price at which the pumps may be obtained.

#### TELEGRAMS VIA WIRE FENCE.

Wireless telegraphy is not the only sort that does away with the expense of stringing wires to convey the electric current, but probably most people don't know that this item of original expenditure was removed, so far as short lines were concerned, more than ten years ago, and the method then employed is as feasible to-day as it was then.

A couple of young ingenious New Englanders solved the problem. Both of them, at the ages of eighteen and nineteen years, were masters of the key. One lived in Wilmington and the other in North Wilmington, Mass., their homes being a mile and a half apart. Each had a cheap telegraph outfit set up in his house, and practiced during leisure hours, but this form of solitary amusement soon grew monotonous, and there arose the question whether a line could not be established between their residences.

"The most serious obstacle to such a scheme," said one of the men recently, "lay in procuring the wire, which, at the lowest estimate, would cost about \$20. Then batteries would be needed—perhaps a dozen or more of them—and the market

price of a single battery was from 60 cents to \$1. Poles could be made out of trees, while insulators cost but a trifle. But where were we to get \$30 for wire and batteries?

"In considering the matter, we hit upon a novel idea. About 100 feet east of my house was a barbed wire fence which, we found on investigation, extended to within only a few rods of my friend's home. The fence didn't follow a straight line by any means—there were several short breaks in it. Here and there it surrounded a cow pasture, or a henery, or described a semicircle back of a dwelling. But these irregularities, we thought, did not matter. We were determined to utilize that fence.

"Wiseacres to whom we confided our proposition laughed at it. 'T would never succeed, they said, because, in the first place, nine-tenths of the current applied would escape to the ground by way of the posts and trees to which the fence was attached. Secondly, they argued, that a barbed wire fence was unsuited, anyway, for transmitting electricity, because of the poor quality of the wire itself. Thirdly, there were too many crooks and turns in the fence.

"Stoutly ignoring all such discouragements, we set about executing our plans. We knew that paint—ordinary house paint—was a good non-conductor of electricity. My friend's father had just built and painted a new barn, and he had three or four quarts of the paint left over. This was more than enough for our needs.

"With a small brush we applied a daub at every point where the barbed wire strand we decided to use was fastened. We were careful to see that the oily substances got in between the wire and the post, or between the wire and the trees, as the case might be. When the first coat had become thoroughly dry, we applied another in order to make the insulation as complete as possible.

"With a few hundred feet of covered wire we obtained from the railroad station agent we connected the ends of the fence at roads and other places where it was broken, burying the connecting wire slightly in soil, so that nothing would interfere with it. Before this wire was

laid it also was subjected to a heavy coating of paint, so that the moisture in the soil might not penetrate the covering and 'ground' the circuit.

"Having finished the metallic part of the line, we proceeded to sink a short section of iron rail six feet in the earth at each end of the line—to act as a ground plate and enable us to use the earth as a return wire in the usual way.

"Then arose the question of batteries. Why, we asked ourselves, were glass cells necessary? Would not any sort of self-insulating receptacles of suitable size answer the purpose? If so, there were enough half-gallon paint pots at our disposal to furnish a complete outfit of 'crowfoot' batteries. We tried one, by way of experiment, and found that it worked admirably.

"How to secure zinc plates and coppers for the batteries was the next to be considered. We already had four zincs, but at least three times that number would be needed. I suggested that we make some ourselves, by collecting and melting a quantity of old zinc sheeting which the farmers in the neighborhood had used to protect their orchards from caterpillars.

"By making an impression in some molders' sand with one of our old zincs, we were able to turn out a dozen plates without any trouble. The coppers—second-hand, to be sure, but none the less serviceable—we obtained from our good friend, the station agent, who never hesitated to discard as useless to himself anything likely to be of value to us. A few pounds of blue vitriol would suffice to generate the current, and for this we had to pay, as I remember it, about \$1.

"Well, after giving those batteries from twenty-four to thirty-six hours in which to acquire their full strength, our instruments—cheap and clumsy as they were—responded perfectly. The only difficulty we experienced was in rainy weather, when the water, trickling down the fence posts, robbed us of 'fluid' by partially grounding the circuit. Even this annoyance might have been overcome by using relays.

"Was the line of any real benefit to us? Perhaps you can answer that for yourself

when I tell you that we used it for three years and became expert telegraphers."

### LABOR AND INVENTION.

The world now to be governed is getting more and more complex. Man is utilizing the energies of nature in thousands of ways unknown to the ancients. Common people are all getting educated. Where the ancients wondered and trembled, we understand and give orders to nature. The average unit of any population was compelled to be what we now call an unskilled laborer.

Now our labor is becoming more and more skilled. Are you aware that from one ton of coal there is as much energy, as much actual work, as may be done by 40,000 good laborers in a ten-hour day? Our best steam engines utilize only one-tenth of this energy at the present time. But even now we know that the cost of the most unskilled work done by man is one thousand times the cost of the same work wherever it may be done by the best steam engine. One fact of this kind, properly considered, is worth many long essays about the effect of the engineer in altering all the character of our civilization. It is labor that is the true standard of wealth. The steam engine has added incalculably to the wealth of the world. We forget that man is no longer needed for unskilled labor, so that when we use unskilled labor we are using the materials which God has given us in the most inefficient manner possible. Furthermore, it becomes sweated labor, it unduly taxes skilled labor, it starves invention, and it brings up base and ill-fed families.—*Dr. John Perry.*

### NOT A GOOD STYLE.

'The Property Man—Who's de Johnny wi' de leadin' woman?

The Soubrette—Why, that's her latest husband.

'The Property Man—Well, I don't t'ink dat style will be fashionable very long.—*Town Topics.*

The money lent by France to Russia during the last decade is variously computed at from \$1,400,000,000 to \$2,000,000,000.

## LARGEST PIPE ORGAN IN THE WORLD FOR ST. LOUIS

ONE of the most interesting musical and semi-electrical features of the St. Louis Exposition will be the immense pipe organ built by the Los Angeles Art Organ Company, of Los Angeles, Cal., for the Kansas City Convention Hall Company, and which will be the official concert organ at the Festival Musical Hall. It is, we understand, the largest pipe organ in the world, and is certainly the largest aggregation of musical mechanism placed under electrical control. It is 63 ft. long, 30 ft. deep, 50 ft.

Fig. 1 on cover shows the organ set up in the factory, without the display pipes; and its relative size can be inferred from the surrounding objects. The instrument will be played from two independent consoles of the most perfect construction and design. The most important console is movable (Fig. 2) and is connected to the organ by an electric cable 150 ft. long. This console contains the radiating and concave pedal clavier, the five manual clavier, the 140 draw stop knobs, the five tremulant draws

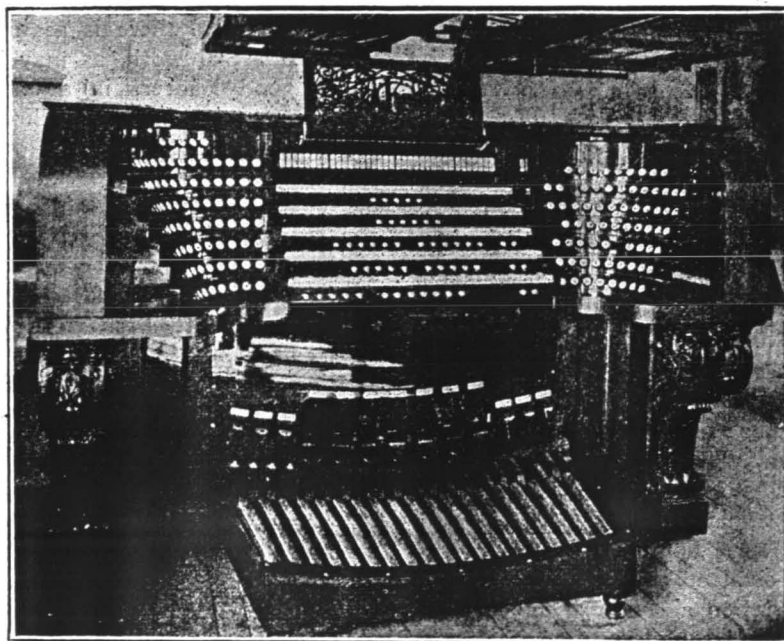


FIG. 2.—CONSOLE OF ST. LOUIS FAIR PIPE ORGAN

high. It has 10,059 pipes. The largest metal pipe is 37 ft. 6 in.; weight, 840 pounds; smallest metal pipe  $\frac{3}{4}$  in., 3-16 in. diameter; weight less than  $\frac{1}{2}$  ounce. The largest wood pipe is 22 x 27 in. inside; stock,  $2\frac{1}{2}$  in. thick, 32 ft. long; it weighs 1,500 pounds. Over 80,000 ft. of lumber were used in the organ interior; this does not include that used in the construction of the case. It has 130 miles of electric wire, 140 speaking stops, 1,300 magnets, 99 mechanical movements and is capable of producing 17,179,869,183 distinct tonal combinations. It takes 12 large furniture cars to move it and weighs 250,000 pounds.

and the 36 coupler draws, the 46 push buttons belonging to the adjustable combination system, and all the foot pedals controlling the expressive powers of the whole organ, etc., etc. This console is for the virtuoso who performs in the usual manner with hands and feet.

The second console is stationary, and is entirely devoted to the builders' double-roll automatic self-playing attachment. Through the agency of the double or twin rolls, the most complicated orchestral scores can be rendered with absolute accuracy, and compositions can be performed which are far beyond the powers of the most accom-

plished organist. This console resembles that first described, except that it does not possess the manual and pedal clavier, which are not necessary where the double-roll, self-playing attachment appears. Within its arms, so to speak, sits the musician, entirely unembarrassed with the calls of six clavier upon his hands and feet, having at his immediate command the vast tonal forces (represented by 10,000 pipes) of this gigantic organ; his hands simply engaged in manipulating the draw-stop knobs and combination buttons, and his feet controlling the flexible and expressive powers of the instrument. The double rolls do all the rest.

The bellows of the main portion of the organ will be operated by two 10-hp motors, at 220 volts, direct current. The echo organ bellows will be operated by a 1½-hp motor of 220 volts, direct current. The wind-chests, through which the wind from the regulators is distributed to the 140 speaking stops, and the 10,059 pipes, are 12 ft. long and of widths sufficient to give every rank of pipes planted thereon ample speaking room.

The organ is constructed under the Fleming electropneumatic system, which gives the most satisfactory results. The organ contains 1,300 magnets, as noted above, for both key and draw-stop actions. There are 130 miles of wire in magnets and cables, from No. 20 up to No. 34 B. & S. gauge. There are also 1,616 automatic combination knobs for setting combinations electrically throughout the organ. There are few automatic electric swell engines for the actuation of the swell shutters. There are above 7,000 open circuits in the organ. The company's special contact wire, of unusual costliness, is used in the key and coupler actions. The single-contact system is used, so arranged as to be durable and always reliable. The coupler action contacts clean themselves automatically, and all trouble is thereby prevented. The storage batteries used will have four cells of two volts each, with normal discharge of 50 amp. for eight hours. There will be a motor-generator of 220 volts, direct current, with a capacity of 10 volts and 40 amp., to charge the batteries.

The switchboard (Fig. 3) has a voltmeter and ammeter to show the discharge voltage and strength of the batteries at all

times. There will also be a polarity indicator, also a pilot lamp, which will indicate, to a certain extent, the strength of the batteries. There are also a voltmeter and an ammeter on the switchboard, one showing

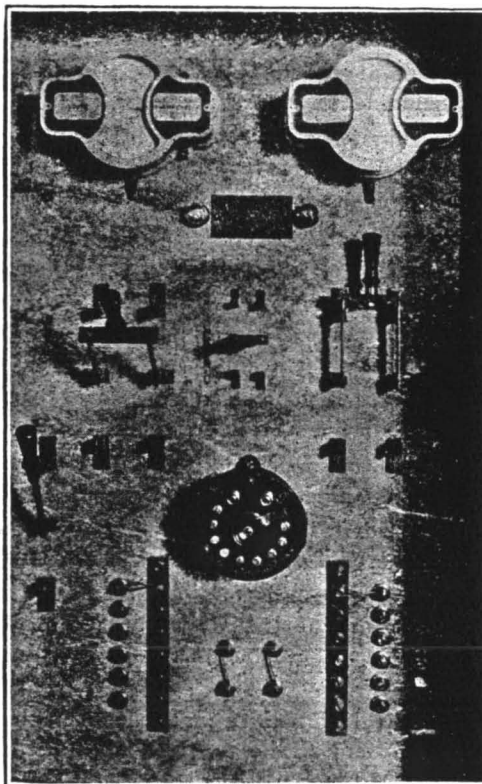


FIG. 3.—SWITCHBOARD.

the voltage charging the batteries and the other showing the amount of the current going into the batteries. Switches are provided for throwing the generator on and off, and for throwing the current off the organ when not in use. The switchboard consists of a marble slab mounted in a handsome oak case with glass door for display purposes.

The entire instrument was built under the personal supervision of Mr. W. B. Fleming, the inventor of the system which bears his name.—*Electrical World and Engineer*.

The tramway system of Hull, England, a town of one-fourth of a million inhabitants, which is owned by the city, is superior to almost any American road, and at a 2-cent fare for all distances, nets annually over \$12,000 for each mile of double track.



### PROGRESS OF THE WORLD.

New York City has 120,000 telephones.

The tolls of the Suez canal in 1903 were \$21,800,000.

About 43,000 people in Great Britain wear glass eyes.

Belgium alone has \$330,000,000 invested in Russian factories and railways.

The Chinese and Japanese make many articles of furniture out of paper.

The Russian consumer pays for sugar three or four times the export price.

The cost of cleaning the streets of Paris is 12 cents per square yard per annum.

In all countries more marriages take place in June than in any other month.

Of the 104 lynchings during last year, but twenty-one were for criminal assault.

Of the 4,500 paper mills in the world, Asia has but nineteen and Africa but four.

The murders in the United States in 1903 numbered 8,976; the legal executions numbered but 123.

The receipts of the Cuban government last year were \$18,007,302, and its expenses were \$15,933,646.

American locomotives are used on the Yafa-Jerusalem Railway, although it is owned by Frenchmen.

Chile will build a "longitudinal railway" 1,200 miles north and south, at an estimated cost of \$28,000,000.

The first central station for incandescent lighting was built by the Edison Company on Holborn Viaduct, London, in 1882.

In the two years since California's promotion committee was formed its immigration has equaled that of the ten previous years.

Of all known illuminants, electric light is easily first from the hygienic standpoint, since its light is produced without sensible combustion.

Torpedoes for the destruction of vessels were first used in the spring of 1861 by the Confederates in the James River. In 1865 the Secretary of the Navy reported that more ships had been lost by torpedoing than from all other causes. Gen. Rains, chief of the Confederate torpedo service,

put the number at fifty-eight, a greater number than has been destroyed in all the wars since.

"Mary Had a Little Lamb" was written by Mrs. Sarah J. Hale in 1830 while editor of the Ladies' Magazine, and printed in a little book of poems for children.

The first electric railway for public use in American was that of the East Cleveland Street Railway Company, which was equipped in 1884. The conductors were laid underground.

According to Prof. Mosso, we are able to live longer the more our nerves are enfeebled. The less robust a person is, he points out, the more able he is to resist the ravages of time and disease.

The State of Utah has ordered a general health day—namely, the first Monday in October. On this day all theaters, churches, public halls, hotels, boarding houses, &c., must be thoroughly disinfected.

M. Rouault has found that trees may be transplanted in full foliage in May or June with little or no injury, if the moving is done at night. This has been demonstrated to the entire satisfaction of prominent French horticulturists.

The Greek church is the largest Christian organization, except that of Rome, from which it seceded. It would rank third, however, if the Protestant churches were united. Its political importance depends upon the fact that the Czar is its head.

Culebra, the island twenty-five miles west of Porto Rico, which has been strongly fortified by the United States, commands the Anegada Passage, which is used by all European commerce with the Isthmus of Panama, more effectually than Gibraltar commands the entrance to the Mediterranean.

By the report of the Interstate Commerce Commission for 1902, the passenger receipts of all the railroads for that year were \$393,000,000. The receipts for carrying the mails were \$39,000,000. If the mails received their proportionate amount of space and are part of the passenger business, there would be one mail car for every tenth passenger car throughout the country.



A Berlin firm has sent to Moscow an order for the immediate supply of 80,000 magpies, which will be shot to provide trimmings for ladies' hats. Agriculturists deplore this wholesale slaughter of "birds which feed largely on noxious insects."

The family of a dead Japanese soldier gets, roughly speaking, one-third of the pay of his rank. This would give the widow of a private \$1.25 a month; of a first lieutenant, \$6.25; of a captain, \$8.33; and to the widow of a colonel, \$20 a month.

The Austro-Hungarian government has agreed to give a large subsidy to the Cunard Company for ten years on the stipulation that the Cunard Company provide twenty-six ships direct per annum from Fiume and Trieste. This will take from Hamburg lines the immense business of carrying the emigrants from Southwestern Europe to America.

"A Japanese associates three ideas in the time a Russian takes to formulate one. I have sat in classrooms beside both," says a writer in the Pall Mall Gazette, "and the greater length of the Russian thigh-bone, the greater weight of the Russian musculature, go for just precisely nothing at all. Nowadays men battle not with brawn, but brains."

A French company of wireless telegraphy is arranging to provide the Russian government with a wireless system which will enable it to communicate between stations thirty miles apart. The Japanese vessels were so fitted out before hostilities began, and they were using a wireless apparatus between Korea and Japan, an intermediate station having been placed upon an island in the Korean Strait.

One hundred millions of Russian peasants are slowly starving to death. The average earnings in the central provinces are seventeen and eighteen copecks (eight to nine cents) per day throughout the year; during the busiest harvest time they rise to an average of twenty-seven to thirty-six copecks; during the whole winter they earn nothing. Their diet consists of meal, flour, and grits, cabbage and potatoes; no meat except three times a year. Their diet is insufficient, and less than in any civilized country. The hovels they live in are two and a half yards long and one

and one-half yards high, harboring the whole family and whatever cattle they possess. These data are taken from official sources.

When large-sized freight engines were first put out, a few years ago, the railroad men called them "hogs," and the man who could "fire a hog and keep her hot" was fit for almost any trying work. Then came a still larger class, soon styled "whales." Then the new compounds appeared, towering high above the "whales." They were at once dubbed "battleships."

Peru is one of the richest countries of the world in minerals of all kinds—gold, silver, copper, mercury, iron, lead, sulphur, coal, salt, petroleum, &c., being found in great abundance—and it only requires the action of capital and labor to make the republic as renowned for its wealth as California, Australia, or South Africa, says the United States consul at Callao.

The General Electric Company is building the largest searchlight made. It is to take 300 amperes, and the lens is seven feet in diameter. It will be used on top of a tower which is being built adjoining the World's Fair grounds. It is not unlikely that experiments with telephony over this searchlight beam will be made during the progress of the fair.

From \$12,652,000 to \$15,573,000 worth of butter is now exported from Siberia, or more than twice the value of the wheat export of 1900, the last favorable harvest year. The Siberian cow yields but little milk, but the quality is notable for richness. About nineteen pounds in summer are sufficient to make a pound of butter, while in Denmark some twenty-eight pounds are needed.

A history of one of the sequoias of California, as shown when it was cut for lumber, is given by a United States Senator. It was but fifteen feet in diameter, while many of them are twice that size. In 245 A. D., when it was 516 years of age, a forest fire burned on its trunk a scar three feet in width. After 1,196 years of placid life, in another fire, in 1441 A. D., the tree aged 1,712, received another injury. Another scar followed in 1580, and was not covered with new tissue for fifty-six years. The worst attack of all was in

1787, when the tree, then 2,068 years of age, was attacked by a fire which left a scar eighteen feet wide, reduced by 1890, in 103 years, to fourteen feet. Only ten isolated groves of these trees remain, and only one grove is protected by government ownership.

A leading newspaper of Austria complains that under the reciprocity treaty with Cuba the consumption of sugar in the United States will be fully covered by the home production and Cuban crops. The consumption in the United States is estimated at 2,000,000 tons a year. Out of this Cuba, where the crop is this year nearly 350,000 tons larger than last year, will deliver the lion's share—say 1,200,000 tons. The raw sugar production of Louisiana and Florida contributes 300,000 tons, the Philippines 100,000 tons, and the United States proper turns out 250,000 tons of beet sugar.

The aim of the European economic union, formed in Berlin, will be to make propaganda with Germany, Austria, Switzerland, Holland, Belgium, and France, for an economic alliance and to effect harmonious measures of defense against England, Russia, and the United States. It is suggested that the United States can only be effectually influenced against the protective tariff policy if it has to count with the possible loss of a large trade territory, such as "would be represented by an economical alliance between the German Empire, Austria-Hungary, and France, with its 153,000,000 people." The Kaiser's brother-in-law, Duke Ernst Gunther, in accepting the presidency of the alliance, said their first duty was to stem the tide of American-made goods which was sweeping the European markets.

A curious correlation between the ages of husband and wife appears to have been established in the course of a recent investigation of the inheritance of physical qualities by Prof. Karl Pearson. Prof. Pearson's results, published in *Biometrika*, may be briefly summarized: "These data have shown that there is a very definite correlation between the degrees of longevity of husband and wife. Things take place as if men destined for a long life had chosen for partners women also destined to live

to old age, while short-lived men generally marry short-lived women. There has been an unconscious selection from the point of view of general vitality. This follows clearly from the study of the age of decrease of a great number of couples, taken from graveyard inscriptions." The influence of grief upon the longevity of the surviving partner is not taken into account.

A smoke washing apparatus is in successful use in London. It is claimed that the apparatus does away with the necessity for chimneys, as it produces the exact amount of draught required for complete combustion, and deprives the smoke of its noxious properties. It consists of an electrically driven fan, which draws the smoke from the fire and passes it into a stream of water, which, extracts the sulphurous and unconsumed particles. It works automatically and only requires that the water in its lower part should be changed at regular intervals.

The idea that fish nourishes the brain is a peculiar fallacy, says the *Lancet*, London. It is doubtful whether any given food in common use contains constituents which have a selective action, or the property of ministering to any one part of the body more than another. It is often said that fish is a food which ministers particularly to the needs of the brain because it contains phosphorus. As a matter of fact, fish does not contain it in the free state. The notion that fish contains phosphorus had, no doubt, its origin in the glowing or phosphorescence in the dark. This phosphorescence is due not to phosphorus at all, but to micro-organisms.

The vilified cigarette is defended by the editor of the *Medical Examiner*, London, who cannot understand why people who see no objection to the pipe and cigar, are so down on it. The editor refers to the numerous misguided and mistaken men and women, who, self-deceived, confuse the things which they happen to like and dislike, with things which, judged by some high and artificial standard, are ethically right and wrong. Dreadfully in earnest, self-hypnotized to the point of slaying, or of being slain, ready to make or to be made martyrs at the altar of the falsest of all false gods—their own deified vanity—

these people never question their impulses, nor yet ask the reasons why and whence of their own motives. Such men and women are the representative type of the classes which assail the use of tobacco by smoking, when said tobacco is used on a white rice-paper wrapping, but all are quite willing to permit the use of this "powerful narcotic, drug, and poison," provided the tobacco be burned in a hollow receptacle of clay or other material, or when rolled into a bundle within a wrapper made from the leaf of some plant, as that of Indian corn, and this burning be done by the male sex.

#### A VARIABLE ELECTRIC SPEED GEARING.

At the recent Paris Automobile show, among other interesting novelties was a variable speed gear used in connection with a gasoline engine. This gear consists of two small electric generators, one coupled to the driving and the other to the driven shaft. Upon the latter shaft is mounted an armature with a continuous-current winding. Around this and concentric with it is the field casting, which is driven by the engine. This field carries on its outer surface the core and windings of a second generator, and around this again there is a second field casting, running loosely on the shafts.

This arrangement gives two concentric generators, the armature of the outer machine being coupled mechanically to the field of the inner. Various speeds are obtained by various groupings of the electric circuits. At standstill the two armatures are connected in opposition, with the result that no current flows and there is no drag upon the driven shaft. Upon shunting the external field, the electromotive force developed in the corresponding armature is less than that of the inner armature. A current then will flow and cause a turning effort to be exerted upon the shaft. The next speed is secured by short-circuiting the brushes of the inner machine. The third and fourth speeds are obtained by connecting the two armatures in series, the external field first being shunted, and second, without the shunt. In the latter case the speed of the driven is about twice that of the driving wheel. At the second speed they are the same except for slippage.

The two machines are used as brakes by connecting the resistances across the brushes.

#### ROCKEFELLER IN SUNDAY SCHOOL.

The Rockefeller Bible class has perhaps received an undue amount of attention from the press of the country, if a man so prominent in business life as John D. Rockefeller will allow his son to go into the Sunday school business on a large scale, both the teacher and the teacher's father must expect fame to accrue to them. In fact, there is no reason to suppose that the notoriety of the proceeding is either unexpected or unwelcome to them. Those who "do good by stealth and blush to find it fame" do not choose an audience room in a big city church for their modest endeavors.

Last Sunday the elder Rockefeller lent the light of his countenance to the class, not, it is to be assumed, without interest. He did not come empty handed. He had rewards to distribute to those good little boys who had braved the temptations of the Sunday papers and the trolley lines into the country, and come to Sunday school. And these rewards were unique and appropriate, as they say in the advertisements. They were copies of the first book of accounts ever kept by Rockefeller senior.

Inside this ledger was printed a speech made by him six or seven years ago, in which he explained his early methods of acquiring a competence. The later ones he left to be explained by other people. Like all good millionaires, he lived and saved money on a salary which would hardly pay either the room rent, the laundry bills, or the tailor's account of the clerk of to-day. Whether this is due to the degeneracy of modern youth or a change in conditions has not yet been settled. Mr. Rockefeller and Andrew Carnegie, and other millionaires, usually think it is just as easy to economize now as it was in the fifties. Some of the young men who are now starting in life are inclined to think differently.

In this speech Mr. Rockefeller made the following statement:

"I believe it is a religious duty to get all the money you can fairly and honestly; to keep all you can and to give away all you can."

This statement may seem a little puzzling to the average mind. Obviously, if it is a religious duty for a man to get all the money he can (fairly and honestly, in parenthesis) he is not fulfilling his religious duty if he fails to do so. It is, therefore, well for every good and religious man to examine his conscience at intervals and see if he has made all the money he can; if he cannot, by more strenuous thinking, more careful saving, more determined industry, make a little more money yet. The easy-going husband and father, who counts his day imperfect if he does not have a frolic with his children, or a bit of pleasure-seeking with his wife, or some other little recreation to make life more pleasant for himself and other people, cannot be one of the truly religious. He ought to be making money to keep and to give away, in the proportion he himself thinks just. Obviously, also, a man who holds these views will think he is doing the right thing by other people if he merely leaves them free to get all the money they can, fairly and honestly. They have no business to want luxuries or waste their time.

This is the brand of Christianity indicated by Mr. Rockefeller's little sermon. It may not be inappropriate to a Sunday school, but somehow, one wonders what the men who wrote the Gospels would think of it.—*Washington Times*, March 29.

#### THE RETURN OF THE FAN MOTOR.

About this time of the year the electrical fan supply houses begin to lay in a stock of fan motors, which a little later will be put to work throughout the whole of the country, keeping the air in offices and dwellings cool and fresh. The fan motor has been a great favorite since its introduction, and has lost nothing in popularity through familiarity. In fact, it is becoming more and more indispensable in the office, where it frequently retains its place throughout the year. There are many occasions, even during the severest winter, when it is pleasant to put our old friend to work for a little while and stir up and renew the air in a busy room.

Perhaps a word of advice to those who intend purchasing fan motors some time during the coming season will not be

amiss: this is, get your motor early. Frequently some of the most oppressive days, and those on which a fan motor is most appreciated, are the first really warm days. Later on in the summer, when we are a little more hardened to the weather, we are less affected by a close, hot day. It pays in comfort to get your motor soon and have it put in place to be ready at any moment for stirring up and refreshing the air in the room. And another point should not be forgotten: place the motor where it will do the most good—that is, where it will draw in fresh air from the outside and drive the warm, stale air out of the room.—*Electrical Review*.

#### THE N-RAYS.

An interesting and unusual situation has developed in the field of physical research. About a year ago, when some of the remarkable properties of radium were being given to the world by the Curies, and when those of the Röntgen rays were still fresh in mind, Professor Blondlot, one of the foremost of French physicists, announced that he had discovered a new type of radiation. Like the Röntgen rays and those from radium, the new radiation was able to penetrate opaque substances, but unlike them it was a periodic disturbance; that is, it had definite wave-lengths, as do light and heat radiations. It was in the latter aspect that the new radiation appeared of great importance and interest to physicists, for the waves were of lengths hitherto unknown. Professor Blondlot called the radiation the N-rays, after Nancy, the city in which he carried out his experiments.

The properties of the Röntgen rays and those from the radioactive substances radium, thorium, etc., are so familiar and so readily demonstrated, that the announcement by so well known a physicist as Blondlot of the discovery of a new form of radiation was at first accepted without question. Nor is it evident as yet from the interesting accounts in the daily press that there is any doubt as to the existence of these so-called N-rays. Their properties have been described at length, and from the most recent accounts one wonders what new sources of the rays are next to

be discovered. Blondlot found that they were emitted by a Röntgen tube, a Wellsbach light, a glowing metal, and by the sun. Later it developed that they were given off by metals under tension and bending stress, and now, according to Charpentier, human nerves, muscles and the brain during activity emit the N-rays, so that by means of a phosphorescent screen one may "see himself think." Certainly the interested reader is justified in assuming that they are as real and as evident as the Röntgen and radium radiations.

As a matter of fact a grave doubt is entertained among many physicists as to whether the N-rays exist at all. Blondlot's announcements described experiments which indicated that the rays were of the same nature as those of light and heat and that they came within the heretofore blank region of wave-lengths lying between the longest light and shortest electric waves. This announcement alone, without the name of Blondlot, would have been sufficient to attract the attention of physicists. As it was many of the best known in the world at once attempted to repeat Blondlot's experiments, and all, certainly without important exception, met with no success. These failures were in no sense due to any inherent difficulty or delicacy of the experiments, as they were perfectly simple and straightforward. The sole evidence of the existence of the rays in any of Blondlot's experiments was the brightening under their influence of an electric spark, a flame, a piece of faintly illumined paper, or a phosphorescent screen. In other words, it all depended on Blondlot's eyes, and other investigators simply failed to observe the variation of luminosity detected by him. Among the names of those who have announced their inability to detect the N-rays are those of Kauffmann, Donath, Rubens, Drude, Classen and Wood, all experimenters of the first ability.

That the eye is a most unreliable instrument for measuring the intensity of light has long been known. To what errors it is prone may be demonstrated by the simple experiment of looking fixedly

at a dim star on a dark night; if the eye be allowed to shift ever so slightly to one side the star will appear much brighter. In fact Lummer has shown that variations in intensity of the magnitude of those observed by Blondlot can be largely accounted for on such purely physiological grounds. The remarkable aspect of the matter is that Blondlot should have so frequently observed these variations. His acknowledged ability and experience would seem to preclude the possibility of any such repeated error. The most valuable of his experiments, if it should prove reliable, is that in which the rays are concentrated at successive foci by means of lenses. On this depends the determination of their wave-lengths. These foci were observed by the methods described above, and other observers have failed in attempting to repeat the experiment.

Additional confusion has been created by Blondlot's most recent work, which seems to indicate that the wave-lengths of the N-rays instead of being longer than the longest or infra-red light rays are shorter than the ultra-violet or shortest known rays. He has shifted them from one end of the visible spectrum to the other.

What then is the situation? Briefly this: Blondlot's claim, if substantiated, are of the first importance. The bases of these claims are not, however, generally accepted by other physicians. Since criticism has arisen he has attempted to repeat his experiments, and has obtained results inconsistent with his earlier work. Some of his simpler experiments have been corroborated by certain physiologists. In view of his standing and ability as a physicist, no hasty conclusion should be drawn until he has been heard from further. He must, however, make consistent repetitions of his experiments, and with a more reliable measuring instrument than the eye, before they can now be accredited. It is "up to" Blondlot.—*Dr. J. B. Whitehead in Electrical Review.*

Cincinnati has a deaf and dumb barber, but with the aid of a phonograph he manages to pull through.

## TESTING ELECTRIC APPARATUS

BY J. E. PRICE

**E**LECTRICIANS will be interested in knowing that the new Bureau of Standards buildings—in which there is so much that has to do with electricity—will soon have all their scientific equipment, and work of testing instruments, electrical and other, and of experiments, will be in full swing.

The buildings occupy a site situated about two miles from Washington on the Chevy Chase road, and cover a considerable portion of the 71-2 acres, which the Government purchased for this purpose. The cost of the structures was about \$325,000 and their substantial and handsome appearance fully justifies the outlay.

The main building is 150 feet long, 50 feet wide, and four stories in height; there are fifty rooms for apparatus for verification and special investigation work, being also provided with electric light, gas, compressed air, hot and cold water, and independent electric circuits, so that electrical currents of any desired kind may be obtained.

The mechanical laboratory is in a separate building 135 feet long, 50 feet wide, and three stories high. Here is the power and light plant, consisting of two 80-h. p. high speed engines direct-connected to two 25 kw. generators. Space is provided for a unit of double this capacity and for special alternators. Storage batteries, special alternating current machines for testing, etc., refrigerating plant, heating and ventilating plant, machine and carpenter shop, auxiliary apparatus, and laboratories for heavy electrical testing, photometry, and gas and water meter testing, all belong to the mechanical laboratory of the Bureau.

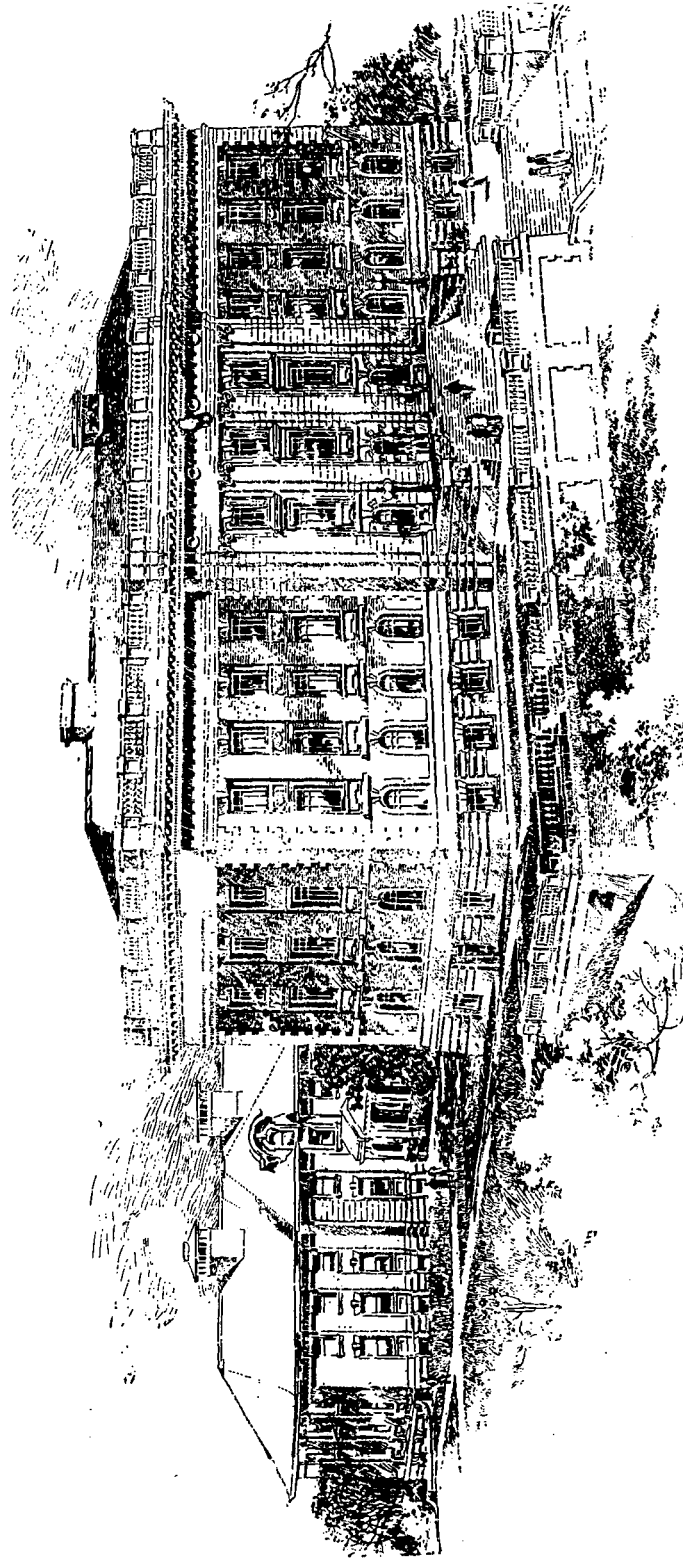
The steam battery consists of two boilers, each of 125-h. p. The heating and ventilating systems are combined, the air being conveyed into the rooms by ducts with the aid of electrically driven fans. The temperature of the rooms is controlled by thermostatic dampers. The air can be artificially cooled as well as heated. For cooling the air and providing artificial ice a refrigerating plant of thirty tons ice-making capacity, is used.

The instrument shop—not yet removed to the new quarters—will be equipped with motor-driven precision and engine lathes, drill presses, milling machines, shapers, etc. A liquid air plant and a gas plant will be parts of the outfit.

For the benefit of electrical workers and others the electrical business of the National Bureau of Standards will be set forth here more particularly. As preliminary, according to Bureau statement: By act of Congress, approved March 3rd, 1901, the office of Standards, Weights and Measures of the Treasury Department was, on July 1st, 1901, superceded by the Bureau of Standards, the functions of which are briefly as follows: The custody of the standards; the comparison of the standards used in scientific investigations, engineering, manufacturing, commerce, and educational institutions, with the standards adopted or recognized by the Government; the construction, when necessary, of standards, their multiples and sub-divisions; the testing and calibration of standard measuring apparatus; the solution of problems which arise in connection with standards; the determination of physical constants and the properties of materials. The Bureau will also furnish such information concerning standards, methods of measurement, physical constants, and the properties of materials as may be at its disposal, and is authorized to exercise its functions for the Government of the United States, for State or municipal governments within the United States, for scientific societies, educational institutions, firms, corporations, or individuals engaged in the manufacturing or other pursuits requiring the use of standards or standard measuring instruments.

For all comparisons, calibrations, tests or investigation, except those performed for the Government of the United States, or State governments, a reasonable fee will be charged.

Standards of approved design, adjusted to within 0.1 per cent. of their nominal values, will be received for verification as precision standards.



NEW BUILDINGS FOR BUREAU OF STANDARDS

For calibration at three temperatures, approximately 15 degrees, 20 degrees, and 25 degrees C., corrections given to 0.001 per cent., with an uncertainty of 0.002-0.005 per cent., depending upon the denomination, design, resistance material, etc., charges are as follows: (a) units, \$3.00; (b) multiples of the unit, \$3.50; (c) tenth and hundredth ohm standards, \$3.50 (sub-multiples of the unit here must be provided with potential terminals, and designed for oil immersion); (d) thousandth and ten-thousandth ohm standards (with same requirements as C), \$4.00; (e) hundred-thousandth ohm standards (same as C), \$5.00; (f) standards adjusted in B. A. units or legal ohms, extra fee 50 cents; (g) standards previously verified at the Bureau or by the Physikalisch-Technische Reichsanstalt, the English National Physical Laboratory, or by the B. A. committee on Electrical Standards, submitted for reverification, at one temperature, approximately 20 degrees C., if accompanied by the original certificate, will be charged only one-half of fees as named above—for resistance standards of precision.

For resistance boxes, wheatstone bridges, potentiometers, ratio coils and other resistance apparatus, grade A, the charge is—first coil \$1.00, each additional coil 20 cents, and for additional temperature 50 per cent. of these fees. Calibration is for one temperature, 20 degrees C. approximately. For testing resistance standards, current measurement, ammeter shunts, etc., charges are from \$1.50 to \$4.00; electrical resistivity and conductivity of materials, \$2.00 to \$3.00; standard cells, \$1.50 to 25 cents; direct current ammeters from \$1.50 to \$3.00; direct current voltmeters and millivoltmeters, \$1.50 to \$2.50.

Without going further into the matter of charges in these schedules for electric apparatus, it may be stated that the fee seldom goes above \$5, and that the average is far below.

The electrical testing work of the Bureau of Standards at present consists of verification of resistance standards of the following values: 1, 10, 100, 1,000, 10,000, 100,000 ohms, and the decimal sub-divisions 0.1, 0.01, 0.001, 0.0001, 0.00001; determination of temperature coefficients for the same; verification of resistance boxes,

potentiometers, ratio coils and other resistance apparatus; verification of resistance standards for current measurement of 0.00001 ohm and above and current-carrying capacity of 1,000 amperes or less; determination of electrical properties of materials, conductivity, temperature coefficients, thermoelectric power; verification of standards of electromotive force—Clark, Weston, or other standard cells; verification of direct and alternating current measuring apparatus—millivoltmeters, voltmeters, up to 2,000 volts; ammeters up to 1,000 amperes; wattmeters and walthour meters up to 1,000 volts and 1,000 amperes. Then comes testing of condensers—measuring capacities and testing for absorption and insulation; verification of inductance standards and measuring the inductances of instruments, and photometry—verification of incandescent photometric standards.

The standards of electromotive force of the Bureau consist of a number of Clark standard cells together with a number of Weston cells, with a saturated cadmium sulphate solution. The results are expressed in terms of the volt derived from the present legal relation: e. m. f. of Clark cell at 15 degrees C. equals 1.434 international volts.

The new building will have special facilities for alternating current testing. These alternators will all be driven by direct-current motors operated from the generators, or when desired, from independent storage batteries. As an example: For determining the influence of the higher harmonics on measuring instruments, transformers, arc lamps, condensers, etc., a set of motor-driven alternators, having relative frequencies of 1, 3, 5, 7, 9, 11, 13 and 15 times the base frequency, will be provided. All these machines are to be connected to one shaft, and arranged so that the amplitude and phase of any component may be varied independently. The base frequency may be varied between 25 and 125; but with the latter frequency it will not be possible to work in the highest harmonics.

The Bureau makes some of its instruments used in testing, but the greater number are bought in this country and abroad; and besides testing apparatus and instruments sent here for this purpose, it constructs such in its shops for outside parties.



Of course the latter pay for this work, but the Bureau does not always receive full value for such service.

Recently the writer saw a standard oil-measure, for the Standard Oil Company, being constructed in one of the Bureau's workshops. The Standard Oil Company desired to find the exact quantity contained in one of their tanks in order to get a standard tank. The measure was a five-gallon receptacle, and this was to be filled and emptied in the tank until the latter was full. It (the measure) was not an elaborate nor complicated piece of work, yet it was said that the value of the time and money expended in its making would be more than the amount to be paid by the oil company for it.

When the Bureau of Standards makes a test for outside parties it gives a certificate containing the following data:

Description or identification marks of article or instrument; Bureau of Standards test-number, name of party for whom instrument is compared, temperature and other conditions of test, table of corrected values or of desired corrections, date of certification, seal of the Bureau and signature of the Director, and special marks where necessary. The Bureau desires to co-operate with manufacturers, scientists, and others, in bringing about more satisfactory conditions relative to weights, measures and measuring instruments, and to place at the disposal of those interested such information relative to these subjects as may be in its possession.

The address is "Bureau of Standards, Department of Commerce and Labor, Washington, D. C."

#### THE DIGNITY OF LABOR.

How often do we hear of the "dignity of labor," but how shallow is the term and its application at this time?

Is there any dignity in our labor when we are certain that at the end of the week the largest portion is to go to those who have had no hand in its direction—being simply the owners of the machinery that we are called upon to operate? Labor may be excellent, worthy, and honorable; but through the deception that is practiced upon it by its exploiters it becomes but the most degraded,

and is defrauded of its healthfulness, its charm and its goodliness.

The words of the Master once dignified labor when He said "In the sweat of thy face shalt thou eat bread." This did not mean that you should "sweat" your neighbors, however, for your bread.

Some of our prelates, humanitarians, and "captains of industry" do not put into practice these precepts of our Great Teacher. That is self-evident to the most casual observer of our economical trend of affairs. The abolishment of poverty would dignify labor, and the "captains of industry" should cease taking the product of labor from the producers—the laborers of the world—who have so long been robbed of the just fruits of their labor, while their oppressors have lived in idleness and luxury, made opulent by those whom they now desire to placate with soft words and fine logic to believe that there is any "dignity of labor" while this state of affairs is allowed to continue.

It is those who have never labored who enjoy all the fruits of real labor, and who for ages after ages have kept labor in ignorance and servility. Does this signify any "dignity of labor?"

When labor is compelled by its poverty to sacrifice its children to the factory, the mine, and the various influences that our system of commercialism demands in order to continue to furnish the world with these "captains of industry," can we say that this is adding to or supplying any "dignity of labor?"

Our entire system will have to be changed before we can honestly claim any "dignity" for labor, and humanity and society will have to undergo a radical change and great purification before even "respect" is shown to labor, not alone to speak of "dignity." Greed will have to be eradicated from the human system; but who has evolved an elixir that will accomplish this end?

In dignifying labor I have not remarked that any of our prominent prelates have taken for their texts any such biblical quotations as these:

"Moreover the profit of the earth is for all; the king himself is served by the field"

"The destruction of the poor is their poverty."

"The sleep of a laboring man is sweet, whether he eat little or much; but the abundance of the rich will not suffer him to sleep."

"It is good and comely for one to eat and to drink, and to enjoy the good of all his labor that he taketh under the sun all the days of his life, which God giveth him—for it is his portion."

"That every man shall eat and drink, and enjoy the good of all his labor—it is the gift of God."

"Go to now, ye rich men, weep and howl for your miseries that shall come upon you. Your riches are corrupted, and your garments are moth-eaten. Your gold and silver is cankered, and the result of them shall be a witness against you, and shall eat your flesh as it were fire. Ye have heaped treasure together for the last days. Behold, the hire of the laborers who have reaped down your fields, which is of you kept back by fraud, crieth; and the cries of them which have reaped are entered into the ears of the Lord of Sabaoth. Ye have lived in pleasure on the earth, and been wanton; ye have nourished your hearts, as in a day of slaughter. Ye have condemned and killed the just; and he doth not resist you."

These words of God signify that there is a "dignity of labor." True Christianity, or socialism, would really and honestly give us that true dignity of labor which we are seeking. But commercialized industry and religion, hand in hand as they now are, will never accomplish aught but destruction to labor, and erase all hopes for any possible "dignity" to accrue to the producers of all wealth—the workingmen—for "the destruction of the poor is their poverty."

Give unto labor that to which it is by right entitled. Let its exploiters be compelled to release labor from the bondage made possible by the unfair power of might, and the result will be that mankind will be governed by the power of love instead of by the love of power, which will assure us the true "dignity of labor."

In the problem of success the dignity of labor does not cut much of a figure; it is opportunity that is most needed. The majority of our so-called self-made men might have had all the requisites of ability

leading to success, but without the opportunity of placing their abilities in the proper channels there would have been no success for them; they would have lived and died in their poverty, without high rank, office, or position.—*William S. Waudby in Typographical Journal.*

#### QUICK WORK.

When the recent fire at Baltimore destroyed the system of the Chesapeake & Potomac Telephone Company, it was announced that immediate steps were being taken to permanently restore the main exchange, which was entirely destroyed, says the *Electrical Review*. It happened that on the Saturday evening preceding the fire two new central offices had been opened. On the Sunday night following, when the conflagration was at its height, it was decided to enlarge one of the new offices which had been equipped to serve about 4,000 telephones, so as to serve over 12,000. Parts of a new board then in Washington, ready for installation in that city, were immediately shipped to Baltimore, and the necessary cables ordered from Chicago. Within two weeks the equipment for 4,000 telephones was in place, and the telephones were rapidly connected. The entire installation was completed on February 29, twenty-one days after the fire originated.

The new switchboard is 135 feet in length and contains 160,000 jacks. In constructing the board, 500,000 hand-soldered connections were made. Thirty-five miles of switchboard cable, containing 2,000 miles of wire, were used.

One week after the fire it was decided by the company's officers to retain the South Exchange to serve subscribers in that part of the city below Pratt street. The work of altering the building to accommodate a larger equipment than had formerly been used there, and of installing apparatus to serve 4,000 subscribers, was shipped from Chicago for this purpose, and the installation was completed February 29, and put in service on March 2.

The loss of the telephone company was not confined to the property actually destroyed, as its cables and lines in the burned district were rendered useless for

the time being. New cables have been made, however, and drawn into the subways and spliced. This work was interfered with to a considerable extent by the wrecking gangs who were engaged in tearing down walls in the vicinity of the manholes where the splicers were compelled to work. The final work of cross-connecting, testing and clearing out is well under way, and it is expected that this will be finished by the end of this week.

In carrying out its plans made at the beginning of the year, the company had just contracted for the erection of a three-story building, thirty-two by eighty feet, for telephone use exclusively, to be located at Wolff and East Fayette streets. This, when completed, will serve east Baltimore, and, meanwhile, subscribers in that part of the city will be connected to the Mount Vernon exchange. As all of the St. Paul telephone numbers have necessarily been changed, a new telephone directory has been prepared. This is now in press, and will soon be in the hands of the subscribers. None of the work done in the restoration of the system is of a temporary character.

#### WHERE WE STAND.

The time is fast approaching when the great majority of corporations—as quite a number have already done—will realize that the proper and business-like way is to meet the representatives of organized labor to discuss and agree upon properly defined working rules and carefully prepared wage scales. Distrust and misunderstanding are the two greatest disorganizers of modern industry, and as long as the two great factors, capital and labor, stand aloof and fire at long range, that long will indiscriminate and unfriendly acts be perpetrated by each toward the other. Trade unionism stands for peace and prosperity. In crafts where it is strongest and best administered, conditions for the worker are the most desirable and the greatest amount of tranquility is obtained. Capital is there found to be in its soundest realm. Great financial bonanzas may not be apparent, but neither do we find the misery and despair of the poorly organized worker or of the non-unionist.

No contract should be more sacred than

the trade agreement of organized labor. It is a matter of honor between the contracting parties that is neither circumscribed by surety companies' bonds nor by compulsory edicts which enslave the body or dwarf the mind. It is regrettable that in too many instances these principles are violated both by the unscrupulous employer and by ignorant or unadvised workmen; but such mistakes should not be viewed as the failure of the labor movement any more than the collapse of a business venture should be considered a slap to civilization. The bar has members with a peculiar itching in the palms of their hands which only unearned greenbacks will soothe; the church has within its fold men who fall by the wayside or hear the voice of God calling them to a larger salary, and the labor movement has its bribe-takers—and the more is the pity that such should exist—but those who expect the trade union to be perfect, while to that extent complimenting it, are expecting too much for the time in which we live.

Again, asserting that the economic movement is one of honor, words fail to express sufficient contempt for the official who barter the confidence of his fellow-workmen either for lucre or for other personal preference. Such a man may revel in notoriety for a brief time, but honest and practical procedure will assert itself and distrust both by bribe-giver and by his old constituents, the dishonored official will be relegated to the rear and will be remembered only as one recalls a disease. So much for the individual. No organization can long maintain the respect necessary to success, a majority of whose members permit an agreement to be openly violated or even casually disrespected. In the trade union movement the young organizations which have not yet learned to follow the lead of older unions in that particular can not do better than pattern after such of them as have by experience proved that a fair and square observance of craft settlements is an essential and fundamental principle of the labor movement.

That violations of agreements sometimes occur is true, but it is also true that in every such instance a great mistake has been made. Sometimes the cause is found in hasty action by the oppressed or over-zealous workman, but often employers, in a

mad desire to outdo some competitor, inflict unbearable conditions on workers which arouse their antagonism and retaliation, and thereby violate the spirit of the agreement as fully as in the other case, and both reasons are equally reprehensible. This feeling will be in evidence on both sides as long as either retains the idea the other has no rights to be respected; but if the up-to-date method, advocated by trade unions is followed, of each conceding that the other has inherent rights and that both should meet and adjust their differences in conference if possible, and if not, then by arbitration, 90 per cent. of the labor disputes causing suspension of production and inconvenience to the public would be prevented. Along this line of thought the moral effect of such a body as the industrial department of the Civic Federation, standing as preceptor for the logical, rational, and pacific adjustment of commercial affairs, will go a long way towards bringing otherwise discordant elements into unison. It is not only essential to provide or suggest a way to adjust affairs of this kind after trouble has ensued, but they will be statesmen indeed of the highest rank who can formulate and put into use either customs or rules which will bring employer and representatives of labor together to formulate new agreements a month or more before the expiration of the old ones. Men's minds are then cool and calculated to reason well, but when the excitement of a change is at its height, ill-digested advantage takes the place of better judgment and less satisfactory settlements are obtained.

In conclusion, a word on limitation of production may not be out of place. Unless in a few instances where physical endurance is at stake, organized workers do not limit production. In their collective bargain they declare for a minimum wage rate and leave the individual to produce what he can. Too often, however, the minimum rate in the bargain is considered a maximum rate by the employer and the public is thereby led into a misconception of conditions, and trade unionism is again required to bear a burden which should be on the other fellow's shoulders. If law will continue to tolerate the sweating system, for instance, sapping the vitality of men, women, and children in their effort to earn

a mere pittance, it becomes a question of practical consideration if trade unionism should not supply the deficiency, as it does others, by seeing to it that human beings shall not be treated as mere machines, and be ground to death at the behest of a false commercialism.—James Duncan in *American Federationist*.

### GREAT ENGINEERING FEAT.

Two young men, 23 years of age and house movers by trade, have just accomplished an extraordinary feat of engineering. They have successfully moved a 300,000-pound steel oil tank down a steep hill to the Allegheny river, transported it a mile down the river on barges and placed it on a bank 200 feet high.

The monster tank was sunk seven feet in the ground and had to be raised before it could be moved forward an inch. The five tracks of the Pennsylvania railroad had to be crossed, and the railroad company gave the movers only 40 minutes' time to get from one side to the other.

This is said by the *Scientific American* to have been one of the greatest tasks ever accomplished by any house mover. The work was done by 24 men and two horses in six weeks.

### POINTED PARAGRAPHS.

Unprofitable apartment houses are flat failures.

A good memory often comes in handy to forget with.

But for the frames some pictures wouldn't be in it.

Some women are not half as bad as they are painted.

The man who is really good often has a sad look that is discouraging.

Necessity knows no law, and it is generally too poor to interest lawyers.

People who like to tell their troubles dislike to listen to the troubles of others.

The average man derives a lot of pleasure from spoiling some other fellow's fun.

A married woman is always suspicious when her husband gives her an expensive present.

The wise female doesn't attempt to monopolize the conversation until after she is married.

## ELECTRIC SPARKLETS.

Electric tramway cars in Rome, Italy, are now fitted with postal boxes, the contents of which are collected every quarter of an hour.

Prof. Charles P. Steinmetz, in speaking before the Labor Lyceum in Schenectady, N. Y., a short time ago, approved the idea of an electrical night school there.

Power sufficient to operate practically every industry in Duluth, Minn., is to be developed through the harnessing of the headwaters of the St. Louis river.

A fine collection of telephone curios has been secured by B. F. Wasson, who has charge of the exhibit which will represent the evolution of the Independent telephone at the World's Fair at St. Louis.

By May 1 Manhattan Island will be a wireless borough, so far as overhead cables are concerned. The one remaining line, that running from 125th street down the west side, will soon be put underground.

The employees of the Russian Westinghouse Company have donated one per cent. of their wages for war purposes, amounting to \$300 monthly. The company has given \$5,000 and will duplicate the monthly offering of its employees.

The committee of experts sent by the Pennsylvania Railroad Company to England, Scotland and Continental Europe to investigate signal and telegraph systems reports that the methods in vogue in this country are superior, on the whole, to those of the countries visited.

In spite of numerous injunctions and other obstructions thrown in its way, the Independent Telephone Company has at last succeeded in getting a long distance connection between Binghamton and Elmira, N. Y., and in that way with a large number of other cities in New York, Pennsylvania and Ohio.

The farmers of Daleville, Ind., have failed to organize a telephone company which has been talked of for some time, and now the Delaware-Madison Telephone Company has announced that it has already purchased a part of the material for a local plant and will begin construction work as soon as the weather will permit.

The office of the Western Union Company in Augusta, Ga., will accept messages for transmission to a number of the ocean liners which have been provided with Marconi apparatus. The rate is \$2.50 for ten words, and 15 cents additional for every word over ten.

Muskrats by burrowing through the embankment of Mohawk Lake, from which power was obtained for the electric light plant at Brantford, Ont., caused the water to flood vacant fields instead of flowing to the plant, entailing a loss of \$5,000 to the company.

It has been announced that the long-delayed opening of the rapid transit subway in New York will take place early in June. Work on the elaborate programme has already begun, and the speakers selected have been notified of the parts which they will be expected to take.

The people of Alma, Mich., have been enjoying the fruits of a war between the Michigan State Telephone Company and the Union (Independent). The Bell Company has been branching out rapidly and the Union offered free 'phones to Alma and St. Louis. The Bell Company is doing the same.

The new "musical" scrapers on the elevated railroad cars in Manhattan were subjected recently to their first really severe test and were found wanting. As the sleet fell on the rails it froze and a thin film of ice was formed on the track. The shoes glided over the coating without picking up current and the scrapers made about as much impression on the coating as the shoes. As a result traffic was delayed and trains stalled.

In a two-and-a-half-mile race between a Missouri Pacific express train and an electric car on the Leavenworth-Kansas City Line recently the railroad locomotive was beaten by two car lengths. The roads are parallel and the electric line manager waited with a party of road officials at the beginning of the stretch. The railway engineer put on all steam, and the cars ran even until the last quarter of a mile, when the electric car slowly forged ahead and bounded across the finish line at fifty miles an hour, winner by 120 feet.

The new \$100,000 switchboard of the Cuyahoga Telephone Company of Cleveland, Ohio, has been completed and put in service. The board is equal to the one recently installed at Buffalo. In capacity, 36,000 subscribers, it is the largest board ever placed in service.

The Central Telephone Company of Nebraska, a concern organized to combine the Independent telephone companies of that State, has incorporated two new telephone exchanges, one at Loup and one at Ravenna. Articles of both exchanges were lately filed with the Secretary of State. Each exchange is capitalized at \$25,000.

The Home Telephone Company of South Bend, Ind., has decided to enter Niles, Mich., in competition with the Michigan Bell Telephone Company. The outlook is favorable for a cut-rate war. The newcomers will extend side lines to Buchanan, Galien, Three Oaks and Cassopolis, supplying service to intervening territory.

In the last six months more than 3,000 rural telephones have been installed in Kansas. The farmers in most cases organize a company, build their own line and charge each member the actual cost of the line and their part of the operating expense. In this manner it makes the telephone cheap. They connect with each other and also with the long-distance companies, making one large complete system. It is stated by good authority that more than 2,000 telephones will be installed next year.

As an indirect consequence of the Marienfelde-Zossen high-speed electrical railway trials, experiments are being made on a number of German railway lines with a view to investigating the working conditions of a steam railway service with increased speeds, says the London *Electrical Engineer*. On the Cassel-Hanover line, for instance, the trains tested are made up of gigantic high-speed locomotives and solidly connected six-axle cars, warranting a mean speed as high as 81 miles per hour. This speed would enable the journey between Berlin and Hamburg to be completed in about two hours, and it is stated that two such trains would be sufficient to cope with the present traffic. In the case of these experiments giving

satisfactory results, it is thought probable that next summer some specially suitable lines will be arranged for a similar increased speed service, the more so as the Berlin-Zossen trials have shown existing permanent ways (provided they be fitted with heavy rails) to be fully suitable for a similar service. Even in the case of the introduction of electric high-speed railways being postponed for economical reasons, a material improvement in the German high-speed railway service may therefore be anticipated as far as lines with especially dense traffic are concerned.

According to the London *Electrical Engineer*, there is a great activity in the utilization of electricity in Japan, for lighting power and traction purposes. The electric light works at Tokio have been in operation for a considerable time, with much success. The output at present is 5,000 horsepower, but this is being increased by an additional 3,600 horsepower. One city of Japan plans to develop 10,000 horsepower by using the power of the Tama river. Power stations will be erected at three points. Electric traction systems are being installed at various points, one of these, twenty miles in length, now being built. The power plant for this road is in course of erection and will have an output of 540 horsepower.

In the report of the Belgian consul to Yokohama are to be found some points relating to the tramway lines in Japan. The city of Tokio is now changing over its lines from animal to electric traction. A long electric road is that which runs between Fujisawa and Kamakura; it has been in operation for six months or more and works very successfully. The trucks of the cars and the electric outfit have been furnished by a German firm, but the car bodies were built in Japan. An electric tramway is soon to be constructed in Osaka. It will be under municipal control. The line is to run from the harbor through the town for a length of three miles or more. An electric road of home construction will be the new line which is to run from Osaka to Kobe. It is in charge of the Hanjin Electric Traction Company. This road will be no less than twenty miles long. It is to be divided

into nine sections for the construction work and given to native contractors. It is of interest to note that the metallic part of the roadbed is to be supplied by a home company, the Mitsui Busan Kaisha, which is a large metallurgical establishment devoted to structural ironwork. It is to be remarked in general that electric traction is on the increase in Japan. Home companies seem to control operations almost entirely, and it is only the motor (and in some cases the trucks) and a few other parts which are ordered from foreign countries.

For several months past Wolcott, N. Y., has been enjoying the benefits of a well-equipped telephone exchange without any cost to the patrons of the exchange. Some time ago the Empire Telephone Company established an exchange there with about 80 subscribers, with the understanding they should have its benefits three months free of cost. The time expired March 1, but as the company has recently been reorganized the telephone rates have not yet been fixed and the probabilities are that the free service will continue a few weeks longer. There is some prospect of an exchange being established by local parties in case the established rates of the present company should prove too high.

Prof. R. B. Owens of McGill University, lecturing before the Insurance Institute of Montreal on "Interior Electric Wiring," gave the three conditions which must be fulfilled to involve the minimum risk to property and life. First, the conductor system must be of such ample current carrying capacity that there would be no overheating of the conductors, which would mean probably fire of some sort. In the second place, the conductor must be so insulated as to render it harmless with regard to shock and also to prevent any leakage of the current, which might cause fire. Third, no conductor system could be considered properly installed unless all the best known current pressure limiting devices were attached to it. There are three systems of interior winding—open cleat, molded and conduit. The last named was the only one that could be relied on with safety. With a properly insulated conduit system, he believed there would be no chance of danger.

The resistance of selenium has been found to be diminished not only by light but by X-rays and those given off by radium. A. B. Griffiths now finds that it is also lowered by exposure to alcoholic solutions of certain vegetable pigments. An exposure of fifteen minutes at a distance of five centimetres gives a marked effect. A solution of the coloring matter of geranium petals caused the resistance to drop from 462,000 ohms to 320,000. The verbena pigment gave a fall from 340,000 ohms to 290,000, and other vegetable pigments produced like results. It is to be inferred from these results that the pigments give off rays analogous to the others which effect selenium.

A very practical application of wireless telegraphy has been made by the Italian Legation at Peking. It has installed a station at its headquarters which allows it to exchange messages with the Italian war vessels which lie in the harbors of Taku or Tientsin. This gives it a direct connection with the fleet without needing to use the Chinese overland lines. The value of such a system is at once apparent and it would be of the greatest service in case of war. The Legation can also telegraph to the war vessels which are cruising off the northern coast of China. At the time of starting the station, messages were exchanged between the Legation and Vice-Admiral Mirabello, on board the battle-ship Victor Pisani, located in the Gulf of Petchili.

Snow caused an accident on the overhead part of the Paris Metropolitan not long ago, which although not of a very serious nature in the present case, might have proved so under other circumstances. The fact that a snowfall is a rare occurrence no doubt accounts for the lack of proper precautions for preventing accidents of this kind, but it is likely that the matter will be looked into so as to provide for the future. Owing to a short-circuit between the third rail and the ground, a number of the insulating blocks which support the rail were burned, and one of the motor-cars caught fire. The accident occurred on the overhead structure which forms part of the new section of the Metropolitan lying in the northern part of the city. It was on this section that the disastrous tunnel fire

occurred a few months ago. Owing to a short-circuit between the third rail and the ground, caused by the snow, a fire broke out which burned up twenty of the insulating supports of the rail. These supports are composed of a metallic piece resting on the tie and a second piece which supports the rail. The two are separated by an insulating block of paraffined wood, which has proved very satisfactory in the tunnel sections. The car which was burned did not contain any passengers, which made the accident less serious than it might have been. It occurred early in the morning, and traffic was interrupted on this section during the whole day.

An electric traction line which will prove of great convenience to tourists is the tramway connecting the Resina station of the railroad with the incline which runs up the slope of Vesuvius. Tourists wishing to see the crater have only to take the train from Naples to Resina, which lies on the coast between Portici and Torre del Greco, and then connect with the electric line. This takes them to the first station of the Cook incline, which lies high up on the slope of the mountain. From there the incline brings them to within a short distance of the crater. It has been necessary heretofore to make a long (and expensive) carriage drive from Naples to the incline, or else mount up on horseback from below. The new electric line is to be opened up shortly. It is 4.5 miles long. On the last section which climbs the mountain at a heavy grade, the Strub rack-and-pinion system will be used.

A new primary battery has been recently invented by two Hungarian engineers, Csanyi and Barczay, which is an improved form of Bunsen cell. It is claimed to be greatly superior to the latter. The essential feature of the battery is the use of a mercury salt for the electrolyte. This has been proposed before, but the inventors have secured a greatly increased effect by adding cyanide of potassium and alcohol to the mercury solution. Carbon plates twenty-four centimetres high, seven wide and one thick are placed in one compartment of a cell, and separated from a similar zinc plate two millimetres thick by a porous diaphragm. The carbon is placed in concentrated nitric acid. For the zinc, the

electrolyte is a solution of mercury, to which is added cyanide of potassium and alcohol. To test the superiority of the new battery it was run against a similar cell, using only nitrate of mercury for the zinc. The results of the different tests showed a considerable difference in favor of the new cell. This will be noticed by the following figures: After a thirty minutes' run on a resistance of 0.1 ohm, the ordinary cell showed 0.550 volt and 5.05 amperes, while the new cell gave 1.425 volt and 13.20 amperes.

#### THE CIVIL ENGINEERS AND THE CARNEGIE GIFT.

The American Society of Civil Engineers, through a ballot vote taken recently, has decided not to join with the other national engineering bodies of the country in accepting Mr. Andrew Carnegie's gift of \$1,500,000 for an engineering home in New York city. There were 1,134 votes against acceptance, and 662 for acceptance, or a majority of 472 against the plan.

Following the library dinner of the American Institute of Electrical Engineers, held in February of last year, Mr. Carnegie gave \$1,000,000 to the four principal national engineering societies—the American Society of Civil Engineers, the American Society of Mechanical Engineers, the American Institute of Electrical Engineers. There was also included the Engineers' Club, a social organization, the members of which are also members of the other engineering societies. This money was to be devoted to the erection of a building, or buildings, where all these bodies could be properly housed. Up to the present time there has been about \$600,000 spent in acquiring the most convenient sites for the location of this union building. Within a short time three of the engineering bodies and the Engineers' Club decided to accept this gift, the civil engineers being the only ones not deciding immediately. When plans were more fully formulated, it was seen that the building would have to accommodate at least 12,000 members, if the present rate of growth were only partially kept up. Mr. Carnegie then subscribed an additional \$500,000, making his total subscription \$1,500,000. The ultimate adjustment of



this matter, now that the civils have decided to stay out of the union, will be watched with the deepest interest by engineers throughout the world.

#### TRUE DEMOCRACY.

The natural aristocracy owes no homage to mere wealth. Its glorious ranks draw, from hovels, recruits who come uniformed in sober gray, as well as from mansions, where purple and fine linen are worn. To found aristocracy on birth and hereditary wealth is to make accident the test depriving nature of its right to select. To make character, intelligence, noble work, high purpose, the standard is to put it where the golden spur will be worn by him who wins it. In the order of nature, no Chatterton would starve in his garret, having stretched out his hand in vain supplication to Walpole, the grandee. Only in a system where diabolical art, contrivance, selfish convention, had thwarted nature would Burns break his heart in squalid poverty—lacking the cost of the daily feed of the Duke of Devonshire's dogs. It was not nature, but a system carved out with pens, barriers thrown up by statute, which kept Oliver Goldsmith under the wheels, while Marquises of Queensbury and Dukes of Grafton rode in the gilded coach. Thomas Paine writes *Common Sense* to redeem a people and make them happy; his reward is a debt account of about \$100, which he must pay to his publisher. Edmund Burke writes his pamphlet against democracy, and his reward is the smile of a king, applause of the aristocracy, and a pension of \$10,000 per annum, which democratic taxpayers must pay. Nature is not so unjust. Every beast of the field had its chance to graze; every bird of the air its chance to fly and feed; every fish of the sea its chance to swim and live. The strongest, the fittest, survived the competition; but the chance to compete was always there. Democracy aims to give all a chance. It refuses to entrench any class in the secure possession of the blessings of nature, to the exclusion of all other classes. It refuses to admit that all the merit is to be found in any one class. It refuses to believe that the family which is noblest today will be the noblest a thousand years from to-day. It refuses to despair of the poor and ignorant; refuses to stop the

wheels of evolution; declines to close the avenues of promotion; refuses to put up social, political, education barriers which none but the wealthy may pass; refuses to lend its law-making power to the strong who would exact eternal tribute from the weak. That the strong are strong, democracy can not help; but it can avoid the deep damnation of helping the strong to oppress the weak.—*From Watson's Life of Jefferson.*

#### RADIOACTIVITY AND RADIATION.

In an article with the above title which appeared in your issue of January 23, Dr. Louis Bell sounds a general warning against too hasty interpretation of experiment and consequent construction of theory, and in particular he suggests that the new but generally accepted theory of ionization and its bearing on the phenomena of radioactivity, may perhaps require modification in the light of certain other kindred observations of Blondlot and Sanford. The condemnation of the tendency to jump to conclusions, and of the thirst for sensational deductions will receive general concurrence, but the illustration cited seems hardly a case in point.

If there are two pieces of work in the recent literature of experimental physics the results of which are to be doubted, they are that of Blondlot on the N-rays and that described by F. Sanford in the *Physical Review* of December, 1903, on a so-called new type of radiation.

The name of Blondlot is sufficient to attract attention and respect to any of his work, and his claim to have discovered a new type of "ray" was received with widespread interest. Physicists in all countries immediately began experiments, and further investigations by Blondlot were awaited with impatience. As time passed, however, and other experimenters failed in attempts to repeat Blondlot's observations, an element of doubt arose throwing a haze of uncertainty over the whole work. There need only be mentioned among the many questioning the existence of the N-rays, the names of Rubens, Wood and Lummer. In fact, the last-named has shown that many of Blondlot's observations can be explained as being largely due to physiologi-

cal causes. These observations were frequently on the variation of the intensity of illumination of bits of paper, metal, or of a spark in a dark room. Now, it is common knowledge that if one looks steadily at a star on a dark night, by shifting the eye a little to one side the star appears to change in intensity. Lummer has shown that variations such as those observed by Blondlot may be largely due to such subjective causes, and he points out that a measuring instrument other than the eye must be used before observations of precision can be had. Those of Blondlot's results which are more conclusive and least subject to Lummer's criticism are the ones referring to the condensation of the rays to foci by lenses, thus giving a means of determining their wave length. Apparently, however, all attempts to repeat the original observations have failed, so that until new evidence appears we must reserve judgment here also. Prof. Wood, of Johns Hopkins University, has attempted to repeat many of Blondlot's experiments without success.

From the account in the *Physical Review*, the work of Sanford appears so crude, so wanting in description and data, and so subject to criticism generally that it is difficult to understand how it can be accepted in evidence of anything new. There is hardly an observation which he describes that cannot be explained by the ordinary phenomena of ionization and Röntgen rays, primary or secondary. The observations on reflection and polarization require repetition and fuller description, before they can attract serious attention. The secondary Röntgen radiation which would seem to account for some of Sanford's observations were observed by Perrin in 1897, and their properties have been investigated by Sagnac, Townsend, Thomson and others.

From these facts it seems hardly possible as yet that we have failed to take into sufficient account these new types of radiation in the rapid development of our theories of ionization and radioactivity; theories, the basis of which rest on experiments as conclusive and reliable as they

are beautiful.—*J. B. Whitehead, Ph.D., in Electrical World and Engineer.*

#### **BROTHER MURPHY ADMONISHES.**

I don't think the ideas of Brother M. I. Hawkes, of Shreveport, La., or Brother H. D. Fairchilds, of Salt Lake City, as to Co-operative Telephone Company strike the brothers of the I. B. E. W. just right, as they are very slow in answering them. I think myself that something ought to be done to provide for the old linemen, as a great many of them have not brains to provide for themselves; so the wise ones will have to start something for them. But how are they going to start, is what some of us would like to know. We cannot get one-fourth of them to attend meetings at present, if the WORKER states correctly. I think the first thing is to get good presidents in the chairs of our locals, and when a brother addresses the chair and wants to speak on any question, do not let him be interrupted until he has finished, and do not let any brother take the floor so often that he will tire the other members and make them leave before the meeting is half over, as that is driving more brothers away from the meetings than anything else. Do not try to throw a brother down because he has not a silvery tongue. We can not all be good talkers. Listen to every brother, as we all have equal rights to speak, and try and have the meetings over in good time, as the married brothers do not want to stop out until 12 and 1 o'clock every meeting night. I want to see the meeting closed when I attend. Brothers, do you ever think to ask yourselves what you joined the Brotherhood for? Is it to go to your local every month and hand 75 cents and get a WORKER, take it home, read something funny in it, and throw it away? Does it ever strike you that your place is at the meetings on meeting nights and not in a booze-bazaar or on a street corner? Find out what they are doing with your money and help the Brotherhood, as you agreed to when you joined the ranks, and never refuse office when you can attend to it. Don't get a brother in office and keep him there until he dies, and don't make his office unpleasant for him, as he is doing what you refused to. For goodness sake take a tumble and do your little bit.

Secretaries look over the directory and see that you have the right address in the WORKER.

D. M. MURPHY.

Local 37, Hartford, Conn.

### PRESENT CONDITIONS—HOW SHALL WE MEET THEM?

BY J. H. ANNIS, LOCAL 147.

"The different conditions of human life, as they are presented to the thoughtful mind, awaken within that mind the inquiry what are the ultimates of these conditions?" Man stands a dominating individual upon the threshold of every necessity, he stands before the world a light to shine in every direction, and all there is in him, there is of him, or there is for him, must go out into the human family, that there may come back to him that for which he craves, that for which he is recognizing a need. These rights do not pertain alone to the conditions of belief, but they are practical in their issues, practical in their applications. They are real in their relative conditions between man and man."

Capital and labor have presented their conditions to the world, and the world has discovered a great need that pertains to both classes. We find right and wrong upon either side, and the discriminating intellect of man must gather out of this great confusion that which is best, most just, and righteous for humanity. Brothers, this is the most important suggestion for your contemplation at the present time; it is the portentous sign for the future; it is the important thing for discussion; it is the brightest light that can shine into your lives, that shall equalize the rights of men and bring you into righteous relationships. For it is a divine obligation to our posterity.

When we study man as he existed, as a hermit in the wilds of a primeval world, with no thought beyond the gratification of his animal instincts, and trace his footprints upon the shore of the ages up to his present enormous conditions, we are confronted with the fact that his conditions are one of eternal progress, and ever shall be. Our environments are the results of the aggregated conditions of the ages that have preceded us. And it is our divine obligation to contribute our share to the divine

scheme of eternal progression. Wonderful advancements have been achieved, but mankind is still an infant, slightly overgrown, but still subject to infantile diseases; and we can not be surprised if we see humanity in a febrile condition, and eruptions begin to break out upon the social face. There is a restlessness and feverish discontent gnawing at all the great centers of human activities. "He who runs may read" in the "signs of the times," that we are in the evening of the present age, and already the gray dawn of a new era is breaking on the horizon of human possibilities. For many years religion and free-thought have been at daggers point, but to-day the most formidable warriors in the arena are capital vs. labor. Each independent in its condition, and yet, there exists a mutual dependence one upon the other. Read the facts of the past as they stand out in bold relief against the ancient sky—Rome, Carthage, Nineveh and Babylon—all tottered and fell because of their extravagance and woeful injustice to the rights of man to man. Already we can feel a tremor in the foundations of our social structure!! And who is to blame for it? Who is to blame for these conditions, I ask? Is it the surging mass of humanity that are clamoring for justice? Or, is it the class-conscious bigot who wields a tyrant's hand with selfish intolerance? Let the world pass judgment.

It grieves us sorely to look forward into the as yet unwritten history of the human race and there behold the great blood stains of the fallen heroes who will give their lives to purchase freedom for the masses!!!

We are actors upon this same stage, but we are uneducated to the real conditions; we are prejudiced; we are married to preconceived ideas, and the opposing class plays upon our credulity; we have had the advantage of no rehearsal before the final performance, and, are therefore, unable to take the "cue" when offered. Brothers, wake up! The "cue" has been given! It was given by D. M. Parry, November 17, 1903, when he said: "We have but one thing to fear from organized labor, and that is their vote." That expression shows that they recognize the fact that we hold the balance of power, and as long as they can keep us divided in our ballot, that long nothing is to be feared from us.

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Brothers, I appeal to you not in the name of any party, but in the name of humanity, let us get together on any issue that is nearest satisfaction to all, and vote as a unit. I am ready to sacrifice all my prejudices, all my pre-conceived ideas, everything on the altar of "human well-being" that the rights of the masses may be respected; that a power for good may be exerted, and the freedom of the wage-earner may be attained. Let us know "no law but honor and justice; no allegiance but to the demands of duty; no results but victory."

### THE SYMBOL OF UNIONISM.

BY HARRY S. COYLE, LOCAL 38.

One of the most important factors in organizing the workers is the union label, which stands as a protest against child labor; against the horrible and degrading conditions of the sweat-shop system. The problem of child labor must ever be kept before the eyes of the public. The press has condemned it; the pulpit has raised its voice against it, and trade unions whose duty it is to protest against all that is harmful to the physical and moral nature of society are fighting this monster whose death clutch is fastening its hold upon thousands of pure and innocent children. The employment of children in shops and mills continues to go on under the most frightful of conditions.

I would like to take you into some of the sweat shops and tenement houses of our respective cities and show you the horrible conditions under which these poor, unorganized people work; or into some of the mills in our eastern cities and show you how young girls are forced to labor under the most degrading of conditions. In these shops they use the automatic type of machinery and I am of the impression that two of these machines would constitute a fair day's work for any girl; but no! Greed and selfishness has decreed that they must operate six machines instead of two; that they must work twelve hours instead of eight, and all for the munificent sum of seventy-five cents a day.

The only remedy for this evil is the union label; as long as there is no demand for the label just so long will the non-unionist—the strike breaker—be in a position to compete with the union man.

Child labor is a result of non-unionism. One of our major premises is not to work side by side with children who ought to be in school.

Organization of the mills and shops is impossible without a demand for the label. Knowing what we do of child labor and the operations of the sweat shops and tenement houses I would like to ask the reader if he had any wearing apparel that had not the stamp of unionism upon it? If you have you are guilty of aiding your worst enemy; you are an employer of the strike breaker—the man who stands for all that is low and degrading in society; he would snatch the bread and butter from your mouth if given the opportunity, and reduce you and your family to mere serfs. And yet how strange and unreal it is that union men will go through life supporting and catering to their worst foes. If you do not care anything about the future of yourself; if you have no sympathy for your comrades, nor any sense of love or justice, I am sure that you would take off that scab-made hat and stamp it under foot in indignation and disgust when you had seen the dirt and filth of the shop wherein all such goods are made.

No self-respecting person would ever put a non-union made cigar in his mouth if he saw the people who made them and their surroundings.

In asking you to demand the label we do not ask you to support us in our demands for higher wages or shorter working days, as that is an after thought. But we ask you to help us to abolish child labor with all of its evils, to wipe the sweat-shop system with all of its degrading influences from the land of the free and the home of the brave. We want every one in this great land of ours to understand that the goal of unionism is love and justice to all regardless of color, station or creed.

There are thousands of workingmen in this world who are as blind as bats—who have eyes and see not, who have ears and hear not. They live and work under the most wretched of conditions when relief is in sight if they would only reach out and take it.

In closing let me remind you that every man's welfare is your welfare, and that you must improve the conditions of the lowly.

or they will drag you down to their level. The union label is the most potent factor we have to accomplish this end. So, whenever a merchant offers you a non-union made article remember that it is made under conditions which are bound to result in slavery for the workers.

#### A SIMPLE PROBLEM IN BELL-WIRING.

To begin: This is new wiring; house has been completed with decorations, etc.; every room in house has a push button, which indicates on indicator in kitchen on first floor. A sleeping chamber on second floor front should have had two push buttons, one ringing on fourth floor in rear of servants' quarters, and the other push on the indicator as stated.

Now, we find the return wire for the indicator drop (of the sleeping chamber) broken and leaving the servants' bell the only one operating. What method should be employed in order to ring the bell and drop. Positively there shall be no new wire run in this second floor chamber. Please note when sending in answer, go over diagrams carefully, so you may be sure that the servants' bell will not be interfered with when other bells are operated, which will occur (as we know), ringing back through the indicator if proper connection and changes are not made.

CHAS. W. PETRY.

Washington, D. C.

#### THE SURGEON'S DARING SKILL.

Early in this month of March a surgeon stood with the beating heart of a live man held in his hand. He took six stitches in the organ, put it back in the right place, and the man lived on. The operation was one of a series of surgical marvels of the last two or three years through which the heart has ceased to be the one part of the body sacred from the daring knife and needle.

And now there is news of the heart massage. The vital organ is exposed and subjected to gentle manipulations which restore its beating. So life returns to persons who have seemed to die.

Nor do the newest marvels of surgery stop with operations upon the heart. Within a week there has been announced at a Philadelphia hospital the miracle of splicing

nerves. An interrupted telegraphic circuit of the body was remedied, just as a Western Union line is restored to service by the piecing of two wires. The world moves on, and the doctors with it. The one point further for science to go is to demonstrate life itself.—*New York World*.

#### SWITCHBOARD MEN OF CHICAGO.

Local No. 337 has taken the installers back from Local No. 134, and with the new "phoners" that are coming in at each meeting it has crowded our hall so that we were compelled to rent a larger one.

We have recently lost one of our members, Brother R. W. Netterfield, who committed suicide. He was a repairman and in good standing with the local and his widow received the \$100 death benefit from Local 337.

One of our brothers, P. E. Oswald, has taken a traveling card, and will journey to the coast, so look out for him sister locals, as he is a good "phone fixer" and is all right.

Brother H. H. Hill has taken a traveling card and is working in St. Louis.

W. H. FERRIS.

Chicago, March 30, 1904.

#### REFLECTIONS OF A BACHELOR.

It's very easy for a girl to marry a man if she doesn't want to.

A woman makes an agreement so as to be able to break it if it does not suit her.

It is better for the average girl to imagine even that she can think than that she can sing.

Maybe the woman who brags to others about her husband thinks if she could make them believe it she could make herself believe it.

It's curious, but a girl is sent to school to be educated to be supported as a wife and a boy to college to be educated to support her.

It's curious how a girl never will worry at all over being knock-kneed, when she will grieve herself almost to death because her hair won't curl.

It's a great comfort to a woman to feel that if she were any prettier than she is it would be almost impossible to keep from breaking up the happy families of her friends.

**Reports From Grand Officers.***(Continued from page 16.)*

and they are working for \$1.50 and \$2.00 per day. I think the trouble is they know we are anxious for them and they want to be independent, but I think they will want to go in latter on.

March 5th I went to Decatur, Ala., and found they have a lot of good boys there. Although they have only lately organized their books were in a bad shape, but I helped them to get them straight, and advised them to get a set of books from the General Office as I find it much easier to keep them straight. I attended a regular meeting there with a good attendance.

March 8th I went to Sheffield, Ala., and found every craft organized there but ours. I met some of the linemen there and asked them about a local. They said they would go in, for a man is worth nothing in Sheffield without a card. Well that sounds good to me. I gave an open meeting and got enough for a charter, then I worked up Florence and Tuscumbia, Ala., and installed the local on March 17th with a good membership.

March 18th I went to Nashville, Tenn. They had a local there but had not held a meeting since last August. There is a lineman that works for the Postal by the name of C. Snyder that deserves lots of credit for he has been keeping the per capita tax in to the G. O. The Cumberland Tel. Co. and the Electric Light Co. have their men scared to death. I met a gang of the E. L. Co. men on the street and asked them if there were any card men in the gang. They said no, the company would not let them join the union, and that one of the C. T. & T. Co. men had joined the union and that General Manager Leland Hume asked him what it had cost and when told \$10, asked him why he did not take that \$10 and join the Y. M. C. A., something that would do him some good, and also told him that he could either give up his card or job, so the fellow gave up the card. The C. T. & T. Co. and E. L. Co. made each of their employes a Christmas present last year of the reply of David M. Parry to questions put to him by E. P. Barry, President of

the C. L. U., of Indianapolis. They cost 15 cents each. (A nice present.) Well I called a meeting for Saturday the 19th, and there were not enough for a meeting. Sunday I had a meeting of the C. L. U. called and laid our trouble before them. They promised me their full support, so I called another meeting of the local on Tuesday night and had no attendance, and on the 23rd called another meeting and got enough to hold the charter. We elected delegates to the C. L. U. and we have a secret plan we are working that I think will bring the companies to time. I left there on the 24th and stopped at Hopkinsville, Ky., and found enough there for a charter and landed one that night and on the 26th went to Henderson, Ky., and found thing there in good shape, and gave an open meeting with good success; then came back here and will install this local on April 1st, but the C. T. & T. Co. found out that three of their men had put their name to the charter and they fired them. One of them was told by the manager that the union would do him no good. The lineman told him he would as soon have his card in the union as to be President of the company. If we only had a few more like him.

If T. Brasser should see this would like to hear from him; something important.

DALE SMITH.

Hopkinsville, Ky., March 31, 1904.

**Fifth Vice-President.**

March 1st found me in St. Joseph, Mo. The inside men are holding their own there now and that is all at the present time. They hope to be able to do something soon. The outside men there have a good organization. I went among the Independent Tel. boys there, likewise the Bell fellows there. I found them a stubborn lot, mostly owing to bad deals given them some time ago, which goes to show that if we can't interest them this time we should not antagonize them.

From there I went to Omaha and found things better than I expected.

On the 7th I went to Schuyler, hearing that the Postal had a big bunch of men there. I found that a good many had already left, having been sent to differ-

ent parts of the country. I got three applications.

I then started for Davenport, Ia., where I had been ordered. I stopped off in Des Moines and spent Saturday night and most of Sunday trying to find some No. 55 men. I found a couple who promised to scare up the boys and take me around, but they failed to keep their promise so I went on to Davenport. I found three locals there with very good material, but with the customary factional feeling existing. We called joint meetings and settled all differences to the satisfaction of all. The boys of No. 109 secured a contract with the Light & Power Company. This is a company they have been fighting for seven years. We held an open meeting and had a very fair attendance.

From there I came here to try and see if I could do anything. There are about 65 idle linemen here, so that linemen should avoid coming this way. The fight between No. 292 and the Light people is still on, and trouble is on in Duluth and Ashland, I am told. We have a meeting here Saturday of the North Central Interstate Conference of Electrical Workers which promises to be a large affair. This embraces Wisconsin, Minnesota and Northern Iowa. I am glad to see these conferences springing up as I believe that they can do considerable good. I would like to see the states of Illinois and Iowa form state organizations. An organization of this kind gives us an arm that would cause companies to hesitate some.

I hope that the brothers in 5th District will bear with me, as nearly every local is clamoring for an officer and it is impossible to be in more than one place at a time.

Brothers should learn to help themselves some and not do as I find some doing.

F. L. WITTERS.

Minneapolis, Minn., March 31, 1904.

#### Sixth Vice-President.

I left Dallas on March 5; went to Texarkana, Ark. Visited Local No. 301; found them just recovering from a fire in which most everything they had was destroyed. I found that they were antici-

pating trouble over the wage scale on the following Wednesday night with the Independent Tel. Co. After consulting with a few of the brothers I found it would be rather difficult to do anything before Wednesday night at their regular meeting, so I decided to stay over. The grievance was taken up on that night and discussed pro and con, and a proposition was decided upon and submitted to the company, which they accepted without a word. I think most all concerned were satisfied.

On the 10th I went to Hot Springs, Ark., and found Local No. 215 in very bad condition as the result of the recent trouble. I called a special meeting and found that the F. S. was the only officer left, so I thought the best course to pursue was to elect officers to fill the vacancies, which I did, and got them started off doing business once more. There were also a number of the brothers holding traveling cards which were deposited. I think they will come through all right now if the officers will come to the meetings and do their duty as they pledged themselves to do when they took the obligation. With all due respect to the former officers of No. 215 I think there was very poor management shown in regard to their recent trouble. I think if they had adhered more closely to the Constitution the results would have been quite different.

After getting No. 215 straightened out I went to Little Rock, Ark., on the 15th, with the intention of attending the regular meeting of No. 126. I had quite a lot of mail which had been forwarded to Little Rock so was kept busy all day attending to that. Went to the hall that evening but sorry to say, there were but a few of the brothers there. The F. S. and President were absent and the F. S. had all the books in his possession so it was impossible to hold a meeting. I am very sorry to see such little interest taken. Brothers, if we officers do not come to meetings and take an interest and do our duty how can we expect the members to.

Knowing that the 16th was regular meeting night of Local No. 251 I went from Little Rock to Pine Bluff, Ark. Arrived there at 7 p. m. Went up to the hall and

found quite a number of the brothers there but just about the same conditions prevailed as in Little Rock. No officers present, but they had good excuses. The F. S. had been very sick and the President was just recovering from a spell of sickness.

I then went to Ft. Smith, Ark. Attended a special meeting of Local No. 346 which was well attended. Ft. Smith is pretty well organized with the exception of four or five, and they have hopes of getting them soon. I went around with one of the brothers to see these men. Those whom we met gave us the assurance that they would come across as soon as their financial condition would admit.

On the 20th I went to Paris, Tex. Met most of the boys and arranged for a special meeting on Monday night the 21st. All the boys were present with the exception of one or two who had sickness in their family. No. 320 is building up their membership and I think if they carry out the plans they have laid out it will only be a matter of a short time until they will have all that are working at the business on the inside. I am glad to say that Local No. 320 has placed the Bell Tel. Co. on the fair list.

I went from Paris to Greenville, Tex. Met two or three of the brothers of No. 348 and found that the President was out of town, and as it was raining the brothers thought it would be rather difficult to have a meeting that night so I took the next train for Dallas.

Arrived here in time for regular meeting of Local No. 69. Found them in very good condition, but the attendance was not as good as I would like to have seen.

On the following Monday night I attended a regular meeting of No. 188. They had very good attendance and are doing well.

I have received communications from a number of locals in this district stating that they had elected delegates for the meeting of the District Council to be held on the 17th of April. I am glad to see the locals taking an interest in this matter and hope to see every local represented.

J. P. CONNOR

Dallas, Tex., March 30, 1904.

### Seventh Vice-President.

I wrote my last report from Tacoma, Wash., on February 21st. On the following day I went to Seattle, where I intended to take the boat for Victoria and Vancouver, B. C. On arriving at Seattle I learned that the boat did not leave that night. I started for Vancouver on Wednesday, the 24th via Canadian Pacific R. R. Arrived there that evening and after consulting a directory I called on Brother Cherrel at his home. In company with him I attended a meeting of a committee of inside wiremen who were preparing a schedule which they were to present to the contractors, which met my approval. As the street railway men had not given the electrical workers up, although requested to do so by their executive officer, Brother Cornelius, and as they were holding a meeting that night, I, in company with Brother Cowling, president of Local 213, called on them and requested permission to speak on the differences that existed between the division and the local, and which was granted.

After stating our side of the question we withdrew.

I attended a meeting of Local 213 the following night and wish to congratulate the members on the manner in which they handled their business.

Having made an engagement with the officers of Local 76, of Tacoma, to attend a called meeting of the local on Saturday, the 27th, it was impossible for me to stop in at either Victoria or Whatcom. I returned to Seattle on the 26th; visited Tacoma the following night, in order to get data to work on, and also attend the meeting; returned to Seattle the same night.

Received a telegram from Brother H. L. Worthington, president of Pacific Council, which instructed me to go to Spokane immediately. As Local 217 held their regular meeting on Monday night I thought it better to delay my trip to Spokane until I had attended it.

I left and arrived at the Northern Pacific depot just in time to catch the 10:30 train for Spokane. I arrived at Spokane at 11:15 a. m. the following day.

I immediately started out to try and find out how conditions were in Spokane, and



from statements made to me on the first day, thought that the agreement made by the Pacific States Telephone Co., and Western Conference was not being kept in detail.

I then called on Manager Bush of the Telephone Company to see if he could enlighten me on the subject, and found that he was just as positive that the Company was keeping the agreement.

I attended the called meeting of Local 73 on Friday, March 4th, and received a list of names of the men who were still in Spokane, who had applied for their old positions and had not been returned to work. I had the assurance of the members that they would get the data needed and send it to me.

I left Spokane on Saturday the 5th, and arrived in Seattle on Sunday morning.

On Tuesday, the 7th, in company with Brother Geo. Walters, I went to Tacoma, having received a communication from Brother Harry Worthington, president pro tem. of the Pacific Council, who was handling the different affairs with the Telephone Company in San Francisco, while I was investigating them in the northwest, requesting me to go there and get the names of the men who were not employed by the company; particularly those who were married and most in need of work, as superintendent of construction, Mr. Corcoran was going to try and put them to work. On arriving there we were met by Brother A. M. Craig, president of Local No. 76, and Secretary Young. As they did not feel like taking the responsibility of saying who were most in need of work, we agreed that the matter should be handled by the local when they met on Saturday, March 12th; that the data would be then sent to Brother Geo. Walters, who is the executive officer of that part of the district, with headquarters at Seattle, who would then forward it to Secretary-Treasurer J. L. Cook, of the Pacific Council, of the I. B. E. W., and that a copy of same would be sent to me in San Francisco.

We went over the financial secretary's books and I take pleasure in commending Brother Young for the manner in which he keeps them.

I recommended considering the length of

time that the boys had been out, that the Pacific Council pay per capita for 48 men for the months of July, August, September, October, November and December to the General Office.

We returned to Seattle that night. On the 8th I attended a meeting of the greatest fighting local in the west—No. 77, of Seattle, and found them possessed of the same spirit which they have always been credited with. They are good union men, and find it very hard to take in the "scab," but were always ready to assist the needy brother.

The following day Brother Walters and I went to Everett, and found considerable dissatisfaction existing among several of the floating brothers, as the schedule which the local had been working under with the Light Company, had, as they thought, outlived its usefulness, or in other words, the agreement had run out. They thought another scale should be presented which would raise wages. The Home Guards thought, that considering the conditions that exist all over the country, that is, regarding the number of idle men there are, that they had better not do so, and as the floaters, according to Sec. 12, Art. 14, who had not been in the town for six months could not vote, they were disqualified.

Barney Higgins was there from Butte; "Sliver" Alexander, Roy Becker and several others were there also, and as they wanted to be remembered to their friends throughout the district, I am inserting their compliments to their friends throughout the United States in this month's report.

Brother Geo. Walters went on to Whatcom to look over the books of Local 334. I have received a report from him stating that the books were in very bad shape, but that he had straightened everything out.

He informed me that they had a good local; that the boys have the true union spirit and that now that the books have been straightened out, we will hear good reports from them.

On the 15th I left for Frisco, where I arrived on the morning of the 18th.

I spent the day going over my mail, which had been accumulating since I left Frisco—just one month before to the day. On the 19th, in company with Brother

Worthington, I paid a visit to the Telephone Company and took up matters that I thought were not just right.

They agreed that things could be better and assured us they would straighten out the differences that exist in Spokane, Tacoma, Everett and Portland.

I received a letter from Local 213, of Vancouver, B. C., stating that Division 101, Street Railway Men, had granted the withdrawal cards to the linemen who had made application on the night I attended the meeting, but that there were eight or nine electrical workers who had not applied, who were still in the division. I called on Brother Cornelius in regard to the matter; he informed me that Grand President Mahone, who had been expected in this city, had been called to New York on important business, but would be here in the near future, when we could take up the matter with him. I also had a letter from Local 113, of Colorado Springs, who are showing the true western spirit. They, on finding that they would not receive benefits from the I. B. E. W., took \$135.00 which they had in the treasury, and bought some knobs and wire. They had a hard time to get it as the employers had agreed not to sell them any material, but they managed to get some. When the employers found the boys were getting the material and odd jobs, they evidently becoming suspicious of each other, began to come around to see if they could not sell material to the boys. Finding that the boys did not want material, they began to cut prices, and as they are selling material so much cheaper now than it can be got any other place, the members of Local 113 are taking some from them.

In Tacoma, where the Building Trades Council has dissolved, the members of the local are contracting for themselves, and I will advise that wherever contractors are foolish enough to try to break up either the councils or the locals, that we go into business, and drive them out of the market.

I received a communication from Local 36, of Sacramento, requesting me to go on the ground, as they had presented a scale to the Capitol Telephone Company, and the manager, Mr. Dillman, had refused to grant it, and as the Citizens' Al-

liance had induced the contractors to lock the members of Local 340 out unless they would agree to the "open shop." I left for that place on Sunday, the 20th, being accompanied by President pro tempore Worthington. We arrived in Sacramento that evening and immediately started to try to learn how conditions were. On Monday, the 21st, in company with Brother Hutton, we called at the office of the *Labor Tribune*, and had a conference with its editor, Brother Coleman, who had acted as a committee of one from Federated Trades Council in the conference held with the Capitol Telephone Company in regard to scale presented by Local 36. Not having been able to get any satisfaction from Manager Dillman, the council referred it back to the local. I was then called on the ground, and was astonished when the manager, upon being called up by Brother Hutton, who asked him if he would meet me to talk the matter over, refusing to have anything to do with me, but as he had the privilege, as every man on earth has, to change his mind, we were able later on to arrange for a conference, which resulted in an agreement being reached. We called at the headquarters of the Building Trades Council with Brother Ellison, of Local 340, and found that they had things well in hand.

We attended a meeting of Local 340, and also that of the Federated Trades Council that night, where I exposed the character of Herbert George, at present the organizer of the Citizens' Alliance, who formerly conducted a labor paper in Colorado. Having been caught grafting, organized labor cut him out. As they would have nothing to do with him he offered his services to the Citizens' Alliance.

We returned to San Francisco on the 22nd; attended meeting of Local 151 that night; on 23rd called on Superintendent Corcoran, of the Telephone Company, to see if he had any news from Spokane or Tacoma. As wires were all down as result of big storm, he said it was impossible to get it as soon as that, but assured me that everything would be all right, as he had written to those places and given instructions to put those men to work. I attending meeting of Local No. 6 that

night. Brother Rush, of Local No. 6, and I left Frisco on the 3.30 p. m. train on the 24th for Sacramento, where we arrived at 7:45. We attended a meeting of Local 36. I informed them of conditions agreed on between Manager Dillman of the Capitol Telephone Company, Brother Coleman of the Federated Trades Council, Hutton of Local 36, who is also the executive officer of that district of the Pacific Council, and President pro tem. of the Pacific Council of the I. B. E. W., H. L. Worthington and myself, and the local voted to accept the same.

On the 25th Brothers Rush, Hutton and I called at the office of the Capitol Telephone Company, to see Manager Dillman, but as he was out of town, and I had made up my mind to leave for Frisco that night, we agreed that the local committee should notify him of the action taken by the local. We next went to the Building Trades Council, where we had the pleasure of meeting Mayor Hasset, of Sacramento, who is a union man, and Mr. Brooks, the chairman of the Chamber of Commerce, who were trying to arrange for a conference.

Brother Rush and I called on Secretary of State Curry and Governor Pardee after lunch, and talked over the troubles in Sacramento. We left on the 3:30 p. m. train for Frisco.

The Building Trades Council has everything well in hand.

Having had a request from electrical workers, of Aberdeen, Washington, for ex-Grand Vice-President Eaton to go over to that country, and organize a local, on my instructions he went there on the second of February, and installed Local 458. The organizer of the Pacific Council, Mr. F. Holden, having organized a Local at Santa Cruz, and sent me the names, I, after approving it, forwarded it to the General Office; that was on the 19th. There is a bunch of fellows at Eureka, Humboldt county, who want to be organized. Holden will go there, after which he will go to the northwest. I am leaving for Los Angeles, where there are a great many non-union men. I am going to stay there for some time. That will cut down the expenses, and I hope, swell the per capita.

I think we will get better results by going to places like Los Angeles and staying right there until it is thoroughly organized, than we can by running over the country.

M. J. SULLIVAN

San Francisco, March 26, 1904.

### Grand Secretary's Report for March.

No.	P. C.	Int.	Sup.	But.	Totals.
1	226 60	34 00	10 50		271 10
2	207 30	18 00			225 30
3	449 55	24 00			473 55
4	17 10				17 10
5	199 20	26 00	7 50		232 70
6	110 00	8 00			118 00
7	28 50	2 00			30 50
8	25 60				25 60
9	89 60	12 00			101 60
10			75		75
11	13 40				13 40
12	12 90	2 00			14 90
14	91 50	4 00	25		95 75
15	32 40	12 00	2 00		46 40
16	17 10	4 00	1 00	1 50	23 60
17	82 30	16 00	50		98 80
19	15 00	4 00	1 50		20 50
21	67 20	2 00			69 20
22	9 60				9 60
23	37 30		1 50	50	39 30
24	44 50				44 50
25	11 00				11 00
26	39 00	6 00			45 00
27	63 10		1 00		64 10
28	33 60	2 00			35 60
29	24 00		2 50		26 50
30	28 50	2 00	25		30 75
31	16 80				16 80
32			1 00		1 00
33	15 80	2 00			17 80
34	8 40				8 40
36	60 00	20 00			80 00
38	118 20	2 00			120 20
39	114 90	6 00			120 90
40	8 40				8 40
41			2 50		2 50
42	21 00	2 00	3 25		26 25
44	53 90	5 00	50		59 40
45	31 10				31 10
46			10 00		10 00
48	8 60	2 00			10 60
49	23 10				23 10
50			4 00		4 00
51		2 00			2 00
52	34 20	2 00			36 20
53	12 00		60		12 60
54	10 30	2 00			12 30
55	39 20	14 00			53 20
56	26 40	2 00			28 40
57	39 80	2 00			41 80
58	10 50		75		11 25
59			4 00		4 00
60	12 60		1 00		13 60
61	58 30	6 00	2 50		66 80
62	22 60				22 60
63	4 50		1 25		5 75
65	23 60		4 95		28 45
66	13 80				13 80
67	9 20				9 20
68	28 80		1 00		29 80
71	5 10		1 00		6 10
72	6 90		1 75		8 65
73	22 50	4 00			26 50
74	4 80				4 80
75	33 00	2 00			35 00
76	9 60				9 60
77	32 40	4 00	2 00		38 40
78	8 00		50		8 50
79	11 60	6 00	50		18 10
80	24 00	2 00			26 00
81	21 30	6 00			27 30
83	14 50	4 00	25		18 75
84	21 60	8 00			29 60
86	80 50	6 00	50		87 00

## THE ELECTRICAL WORKER.

No.	P. C.	Int.	Sup.	But.	Totals.	No.	P. C.	Int.	Sup.	But.	Totals.
87	16 00	4 00	25		20 25	193	11 70		75		12 45
88	12 60	8 00			20 60	197	5 70				5 70
89	2 40				2 40	198			1 00		1 00
90	23 70		2 25		25 95	199	19 20	4 00			23 20
92	2 70	4 00			6 70	200	18 30	6 00	4 50		28 80
93	8 10				8 10	201			75		75
94	15 00				15 00	204	12 60	6 00	50		19 10
95	8 40	2 00			10 40	205	15 60				15 60
96	12 90	8 00	50	3 50	24 90	206	6 60				6 60
97	8 70		25		8 95	207	12 00				12 00
99			26		26	208	12 90				12 90
100	11 30				11 30	210	5 40	2 00	1 00		8 40
101	6 10	4 00			10 10	211	2 10		50		2 60
102	21 00	2 00			23 00	212	26 20	2 00	4 25		32 45
103	66 70		1 00		67 70	213	22 30	6 00			28 30
104	58 40	8 00			66 40	214	11 10	14 00	50		25 60
105			50		50	215	4 00				4 00
106	11 40				11 40	216			1 00		1 00
107	11 10	2 00			13 10	217	30 50				30 50
108	12 90	2 00	4 00		18 90	218	7 40		25		7 65
109	6 00		2 00		8 00	220	7 20	2 00			9 20
111	9 60				9 60	221	11 40	6 00	3 00		20 40
112	21 60		1 75		23 35	225	11 70	2 00	3 25		16 95
114	15 80		50		15 80	226	5 70				5 70
115	8 90	4 00			7 90	227			1 00		1 00
116	15 60	4 00			19 60	228	2 60				2 60
117	24 20	2 00	3 75		29 95	229	3 60	8 00			11 60
118	16 20		26		16 46	230	13 70				13 70
119	100 00				100 00	231	9 30				9 30
121	81 40	24 00			105 40	233			25		25
122	11 20	4 00		75	15 95	234	37 50	2 00			39 50
123	3 70	6 00	1 75		11 45	235	25 00	2 00	50		27 60
124	8 80		70		4 50	236	6 30				6 30
125	10 50		1 25		11 75	237	24 30				24 30
127	9 00		50		9 50	238	11 00	4 00			15 00
129	8 40	2 00	1 75		12 15	240	25 50	2 00			27 50
130	11 70	2 00	1 00	1 00	15 70	241	3 00				3 00
131	21 90				21 90	242	4 00				4 00
132	10 00				10 00	243	7 80				7 80
133	13 90	4 00			17 80	244	10 80				10 80
134	418 00	82 00	15 00		515 00	245	30 00				30 00
135	6 00	2 00			8 00	246	8 40		50		10 80
137	29 40	2 00			31 40	247	246 00	21 00			267 00
138	9 90				9 90	248	6 00				6 00
139	9 30	8 00	50		17 80	249	11 40				11 40
140	19 50	2 00	50		22 00	250	11 70				11 70
141	20 00				20 00	255	10 50		2 00		12 50
142	11 40				11 40	256	2 40	7 00	2 00		11 40
143	13 50		3 00		16 50	257	4 80		11 60		16 40
144	15 30	10 00			25 30	258	29 20	20 00	1 00	1 00	51 20
145	11 70				11 70	259	12 50	2 00	1 20		15 70
146	27 00				27 00	260	4 80		25		5 05
147	21 80				21 80	261	2 50				2 50
148	23 10		50		23 60	263	10 30		50		10 80
149	10 80				10 80	264	11 10				11 10
150	12 10	2 00			14 10	265	42 00	8 00	34 00		84 00
153	12 90		50		13 40	266	13 10	2 00			15 10
154	11 80				11 80	267	60 00				60 00
155	22 80	2 00			24 80	268	8 70				8 70
156	12 00	6 00			18 00	269	7 20		5 50		19 70
157	4 80	2 00	1 75		8 55	270	64 00	57 00			121 00
158	5 10	2 00			7 10	272	15 00		1 20		16 20
159	42 20		23 40		65 60	274	10 50	2 00			12 50
161	8 10				8 10	277	6 10		75		6 85
162	10 30	8 00		6 00	24 30	278	9 60		25		9 85
164	55 20				55 20	280	10 80				10 80
165	8 80				8 80	281	31 10	4 00	1 50		36 60
166	28 90	10 00			38 90	282	57 00	18 00	7 50		82 50
167	1 80				1 80	283	44 00	12 00			56 00
168	8 50		50		9 00	284	18 00	2 00	25		20 25
170	29 00	1 00			30 00	286	8 20				8 20
171			10		10	288	7 20		2 75		9 75
172	7 00		4 75		11 75	289		10 00	9 25		19 25
173	6 00		2 00		8 00	290	5 90				5 90
174	7 40	2 00			9 40	292	6 30				6 30
176	29 40	18 00	1 25		48 65	296	3 00				3 00
177			75		75	297	5 70		55		6 25
178	27 00	6 60	1 00		34 00	298		7 00			7 00
179	6 00	12 00	1 00		19 00	299	25 80				25 80
180	16 20	14 00	2 75		32 95	300	14 10	6 00			20 10
181	9 60				9 60	301	6 60		75		7 35
183	6 60	2 06			8 66	302	16 20	4 00			20 20
184	4 80	2 00	60		7 40	303	3 90				3 90
187	12 30				12 30	305		9 00	10 65		19 65
188	23 50	4 00	2 00		29 50	307	6 90		50	1 50	8 90
189		8 00			8 00	308	8 60				8 60
190	10 50		75		11 25	309	11 80				11 80
191	8 40				8 40	310	5 10		1 25		6 35
192	9 60				9 60	311	7 20		25		7 45

No.	P. C.	Int.	Sup.	But.	Totals	No.	P. C.	Int.	Sup.	But.	Totals.	
818	9 00				9 00	439	4 20				4 20	
814	2 10				2 10	440	4 20		1 12		5 32	
816	14 40	12 00			26 40	441	3 90				3 90	
817		5 00			5 00	443	5 70				5 70	
820	10 10	4 00			14 10	444	2 70				2 70	
821	2 70				2 70	445	21 80	2 00	50		23 80	
822	6 30				6 30	446	10 80	3 00	4 25		18 05	
823	4 80				4 80	447	6 00				6 00	
824	4 50	2 00	2 00		8 50	448	4 20	6 00			10 20	
825	19 10	6 00	2 25		27 35	449	8 70	4 00	25		12 95	
827	7 80				7 80	453	8 10	4 00	3 00		15 10	
829	3 80	2 00			5 80	454	4 80	20 00	1 75		26 55	
830	7 20		50		7 70	455	6 80		1 75		8 55	
831	3 90	4 00	2 10		10 00	456	4 50	4 00	1 25		9 75	
832	9 00				9 00	458			11 00		11 00	
834	38 00	4 00	8 00		45 00	459	10 20	7 00	6 00		23 20	
835	17 40	4 00	1 50	1 00	23 90	460	8 00		70		8 70	
837	59 10	4 00			63 10							
838	4 80				4 80		\$7,280 05	\$1,084 00	\$385 95	\$19 50	\$8,769 50	
839	2 40				2 40		Initiation and dues from members G. O.					19 05
840	5 40				5 40		Supplies not sold through local unions.					7 60
841	3 80	2 00			5 80		Buttons not sold through local unions..					13 50
842	7 80				7 80		F. F. McNulty, one dozen buttons.....					9 00
845	22 50		1 00		23 50		Robinson's Key Practical E. W. ....					6 00
846	4 20				4 20		Modern Wiring Diagrams.....					19 50
847	6 30	2 00	1 00		9 30		Sub. and advertisements in E. W. ....					57 00
850	5 10	2 00			7 10		Watch Charms.....					10 00
851	3 70				3 70		Total.....					\$8,911 15
853	15 80		2 50		17 80		Fraternally submitted,					
856	56 10	4 00	1 50		61 60		H. W. SHERMAN,					
858	9 00	2 00	1 00	1 00	13 00		Grand Secretary.					
859	7 80		2 50		10 30		Grand Treasurer's Report for March.					
860	9 00		1 00		10 00		EXPENSES.					
861		6 00			6 00		Death claim, No. 374, G. E. Rappleyea.					
862	20 00		1 75		21 75		Local Union 220 .....					100 00
863	12 00	8 00			20 00		Death claim, No. 375, R. M. Irwin, Local					
865	8 00	2 00	7 25		12 25		Union 14.....					100 00
867	10 60	10 00	2 50		23 10		Death claim, No. 376, F. Carland, Local					
868	6 80				6 80		Union 45 .....					100 00
869	6 00				6 00		Death claim, No. 377, R. E. Clevenger,					
871	6 90				6 90		Local Union 238 .....					100 00
872	6 00	2 00	45		8 45		Death claim, No. 378, L. Zentner, Local					
873			4 75		4 75		Union 187 .....					100 00
874	5 70	4 00			9 70		Death claim, No. 379, R. J. Swift, Local					
875	5 40				5 40		Union 429 .....					100 00
876	188 00	20 00			208 00		Death claim, No. 380, D. D. McKellip,					
877		9 00			9 00		Local Union 68 .....					100 00
878		12 00	13 70		25 70		Death claim, No. 381, P. Rafferty, Local					
879	6 30	2 00			8 30		Union 2.....					100 00
881	21 60		1 00		22 60		Death claim, No. 382, J. S. Murphy, Local					
883	7 70				7 70		Union 23 .....					100 00
887	4 80				4 80		F. J. Sweek, strike benefit No. 41, Buffalo					
888	3 60				3 60		E. Morrison, office supplies.....					500 00
889	3 80				3 80		Per Cap., A. F. of L. for January, February					16 99
891		3 00	8 50		11 50		and March.....					315 00
892	34 00	4 00	2 50		40 50		Whitehead & Hoag Co., Badges .....					51 52
893	16 00	4 00			20 00		" " Buttons .....					48 20
894			50		50		" " Charms .....					61 00
895	3 80		50		4 10		J. F. Drake & Co., two dozen Wiring					
896	9 90				9 90		Diagram books.....					21 60
897	3 30				3 30		J. S. Swormstedt, bond for G. P.....					15 00
899	10 20		75		10 95		J. S. Swormstedt, bond for G. V. P's....					24 50
400	14 70				14 70		H. E. Wilkens Printing Company, printing					
402			50		50		Electrical Worker and cuts .....					1,032 37
403	1 80		06		1 86		F. J. McNulty, expenses for February..					81 15
405	2 70				2 70		E. P. Allman, expenses for February..					74 95
406	3 90			75	4 65		E. T. Mallory, expenses for February....					83 72
407	4 50		2 50		7 00		D. Smith, expenses for February.....					80 50
408	6 00				6 00		M. J. Sullivan, exp. for Feb. and Mar...					186 50
409	6 10		25		6 35		J. Solomon, fire insurance policy .....					6 10
411	4 50	4 00			8 50		Wm. T. Harris, rent .....					30 00
413	1 50		50		2 00		Janitor .....					3 00
416	6 90				6 90		F. J. McNulty, salary, March.....					166 60
420	3 00				3 00		H. W. Sherman, salary, March.....					168 00
422	5 40				5 40		F. J. Sweek, salary, March.....					125 00
423	1 80	1 00			2 80		E. T. Mallory, salary, March.....					125 00
424	19 10	3 00	25		22 35		E. P. Allman, salary, March.....					125 00
425	2 70	2 00		1 00	5 70		D. Smith, salary, March .....					125 00
426	18 20	2 00	2 50		17 70		F. L. Witters, salary, March.....					125 00
427	3 00				3 00		J. P. Connor, salary, March.....					125 00
428	5 70		25		5 95		M. J. Sullivan, salary, March.....					125 00
429	5 00		50		5 50		M. K. Clinton, salary, four weeks.....					72 00
430	2 70				2 70		F. F. Brown, salary, four weeks... ..					52 00
431	8 10		50		8 60							
432	8 40		50		8 90							
433	3 80				3 80							
436	6 00		1 25		7 25							
437	7 10				7 10							
438	32 50	24 00			56 50							

B. B. Goebel, salary, four weeks.....	44 00
B. H. Goldsmith, salary, four weeks.....	44 00
A. E. Malone, salary, four weeks.....	40 00
F. J. Sheehan, salary, three months....	50 00
Mailing Worker.....	66 80
W. J. Larkins, org., N. Y.....	4 75
John Gamble, org., N. Y.....	4 75
C. A. Eaton, org., 458, Aberdeen, Wash.	24 50
Postage.....	88 95
Office supplies.....	2 25
Express.....	24 14
Telegrams.....	4 18
Tel. service for Mar. and Apr.....	9 00
J. Baumgarten & Sons, seals.....	80 00
Yawman & Erbe, cards for filing cabinet	8 50

#### RECAPITULATION.

Amount on hand March 1, 1904.....	18,825 72
Receipts for March.....	8,911 15
	29,736 87
Expenses for March.....	5,803 92
Amount on hand April 1, 1904.....	22,432 95

Fraternally submitted,

F. J. SHEEHAN,  
Grand Treasurer.

AN interesting illustrated article by Chas. H. Coar, on "Theory and Construction of an Ohmmeter," was received too late for publication. It will appear next month.—EDITOR.

#### AGAINST CONVICT LABOR.

Congressman Shibley has introduced in the House of Representatives the following bill restricting the purchase by the Government of articles of convict labor:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That no officer of the Government of the United States or any employe of the Government

of the United States, with authority to enter into any contract on behalf of the Government of the United States, shall, in behalf of the Government of the United States of America, purchase or enter into contract for any material or article of whatsoever nature, kind or description, manufactured or to be manufactured by convict labor."

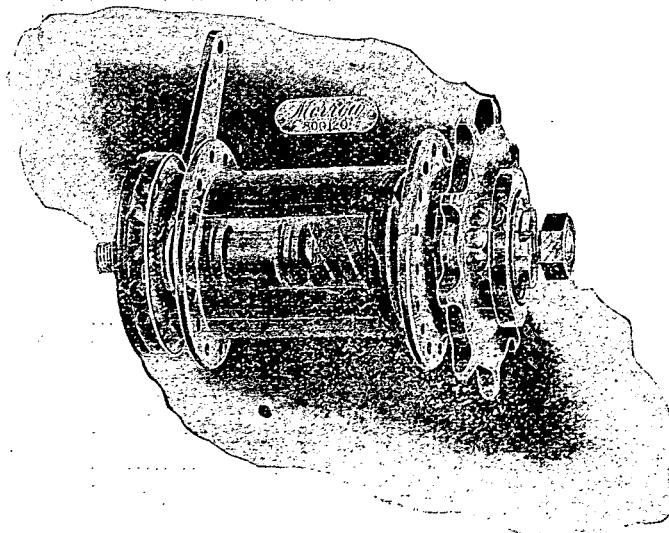
#### ELECTRICITY IN AFRICA.

A company has been formed to exploit Victoria falls, in the Zambesi, and will build a hydroelectric generating station, with the expectation of supplying power to the Waukie coal fields, Bulawayo, the Gwelo, Sebakive and Hartley gold fields, all of which are within 300 miles. The falls are over 400 feet high, and while the total amount of energy running to waste at Niagara is 7,000,000 horsepower, the corresponding figure for the Victoria falls in the wet season is 35,000,000

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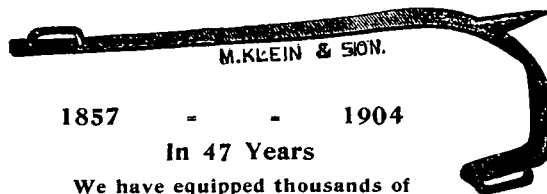


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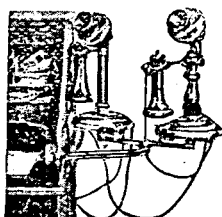
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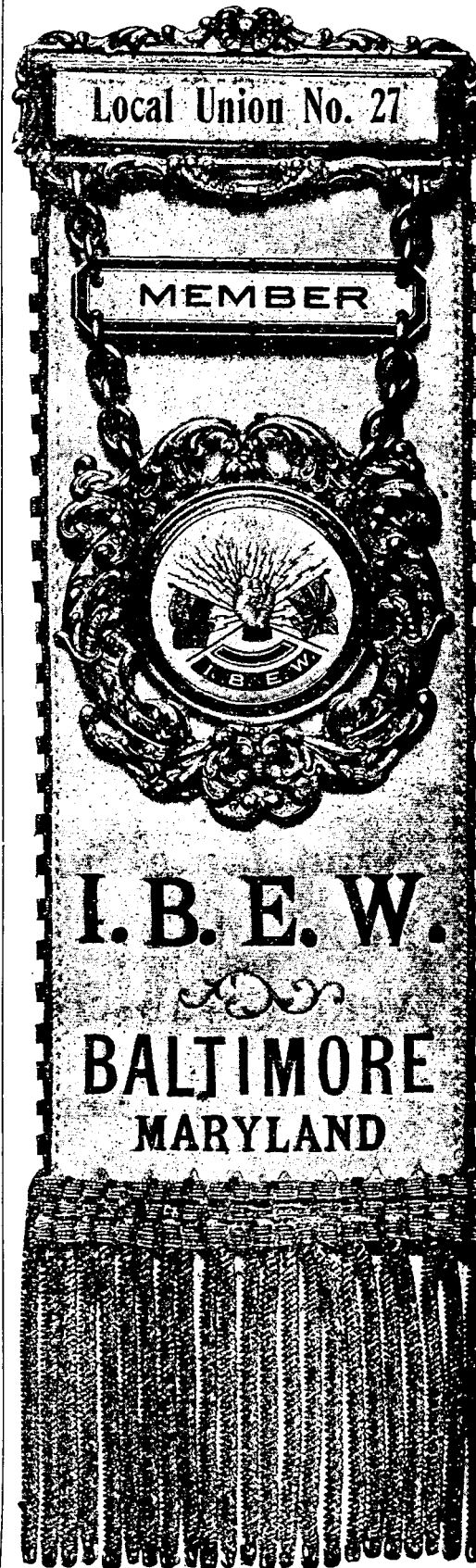
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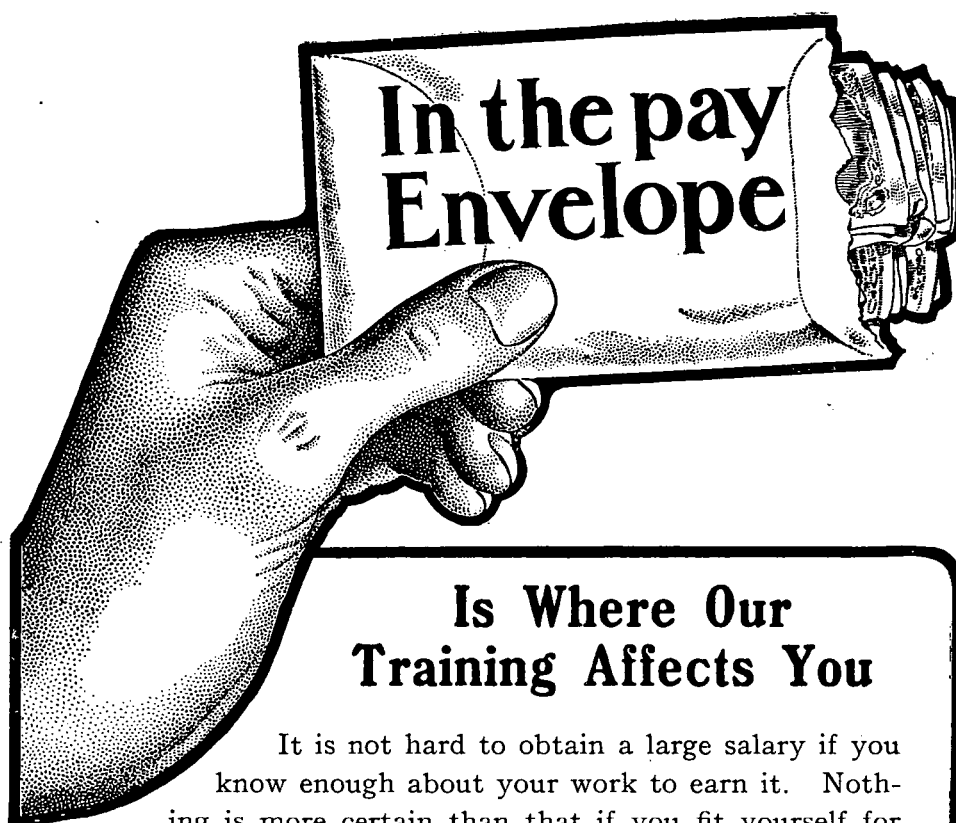
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<input type="checkbox"/> Dynamo Tender	<input type="checkbox"/> Surveyor
<input type="checkbox"/> Motorman	<input type="checkbox"/> Mining Engineer
<input type="checkbox"/> Telephone Engineer	<input type="checkbox"/> Textile-Mill Supt.
<input type="checkbox"/> Mechanical Engineer	<input type="checkbox"/> Textile Designer
<input type="checkbox"/> Mechanical Draftsman	<input type="checkbox"/> Architect
<input type="checkbox"/> Municipal Engineer	<input type="checkbox"/> Bookkeeper
<input type="checkbox"/> Chemist	<input type="checkbox"/> Stenographer
<input type="checkbox"/> Heating and Vent. Eng.	<input type="checkbox"/> Ad. Writer
<input type="checkbox"/> Sheet-Metal Draftsman	<input type="checkbox"/> Show-Card Writer
<input type="checkbox"/> Ornamental Designer	<input type="checkbox"/> To Speak French
<input type="checkbox"/> Sanitary Engineer	<input type="checkbox"/> To Speak German
<input type="checkbox"/> Arch. Draftsman	<input type="checkbox"/> To Speak Spanish

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# DIRECTORY OF UNIONS

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Locals are composed of branches of the trade, as per the following signs:

\*Mixed. †Linemen. ‡Inside Men.  
§Trimmers. ¶Cranemen. ¶Cable Splicers.  
°Switch-board Men. ?Shopmen.

†No. 1, St. Louis, Mo.—Meets every Tuesday night at 8 o'clock at Lightstone's Hall, 1028 Franklin avenue. President, William Gilsdorf, 8921 West Twentieth street; recording secretary, H. J. Morrison, 5944 Theodosia avenue; financial secretary, W. S. Peebles, 3119 Franklin avenue.

†No. 2, St. Louis, Mo.—Meets Saturday evenings at Electrical Worker's Hall, 1028 Franklin avenue. President, M. M. Nichols, 101 Channing avenue; recording secretary, J. A. Norton, 1549 Papin street; financial secretary, J. McManus, 1028 Franklin avenue.

†No. 3, New York.—Meets Tuesday and Thursday nights at Brevort Hall, 154 East Fifty-fourth street. President, J. F. Bergen, 106 Concord street, Brooklyn; recording secretary, P. McNally, 2173 Third avenue; financial secretary, W. A. Hogan, 504 East Fifty-fifth street, New York City.

†No. 4, New Orleans, La.—Meets first and third Wednesday evenings at Room No. 2 Odd Fellows Hall, Camp street, between La Fayette and Poydras. President, John H. McLin, 2323 First street; recording secretary, J. Criss, 2526 Meipomene street; financial secretary, Robert L. Kelly, 2908 Annunciation street.

†No. 5, Pittsburg, Pa.—Meets every Friday at Electrical Workers' Hall, 302 Grant street. President, James E. Bown, 392 Coltart square; recording secretary, S. R. Scheirer, 302 Grant street; financial secretary, J. W. Considine, 302 Grant st.

†No. 6, San Francisco, Cal.—Meets every Wednesday night in Myrtle Hall, Alcazar building, 120 O'Farrell street. President, Geo. F. Keetley, 318 Eddy street; recording secretary, H. J. Morrison, 5944 Theodosia avenue; financial secretary, A. M. Shuhman, 821 York street.

\*No. 7, Springfield Mass.—Meets every Monday at Room 219, Court Square Theater building. President, W. F. Kavanaugh, 221 Summer street; recording secretary, George D. Beecher, 81 Tyler street; financial secretary, J. J. Collins, 110 Congress street.

†No. 8, Toledo, Ohio.—Meets Monday of each week at Friendship Hall, cor. Jefferson and Summit. President, J. W. Strub, 1220 Baker street; recording secretary, S. S. Hepburn, 3139 Summit avenue; financial secretary, M. C. Luttenberger, 423 Floyd avenue.

†No. 9, Chicago, Ill.—Meets every Saturday night 8 p. m., at Sam Jack's Hall, No. 7, 83 East Madison street. President, H. Cullen, 80 Aberdeen street; recording secretary, J. L. Collins, 5907 La Salle street; financial secretary, C. M. Paulson, 390 Park avenue.

\*No. 10, Indianapolis, Ind.—Meets every Monday at Morrison's Hall, Circle street. President, C. A. Sales, 1101 River avenue; recording secretary, J. C. Davis, 433 N. Capitol avenue.

\*No. 11, Waterbury, Conn.—Meets every Friday at Carpenters' Hall, Schlitz bldg., Main street. President, P. J. Horgan, New street; recording secretary, M. J. Quinlan, 31 Welton street; financial secretary, C. H. Little, 347 West Main street.

\*No. 12, Pueblo, Colo.—Meets every Friday evening at Trades' Assembly Hall, Sixth and Main streets. President, Taylor Chun, P. O. Box 70; recording secretary, A. E. Hoes, P. O. Box 70; financial secretary, Joseph E. Marrinan, P. O. Box 57.

\*No. 13, El Paso, Tex.—Meets first four Mondays of each month at Masonic Temple, San Antonio street. President, C. A. Gilbert, Box 620; recording secretary, S. A. Mulliron, Box 620; financial secretary, J. Blake, Box 620.

†No. 14, Pittsburg, Pa.—Meets every Thursday night at Electrical Workers Hall, 802 Grant street. President, J. V. Ferry, Crafton, Pa., P. O. Box 337; recording secretary, C. O. Skinner, 302 Grant st.; financial secretary, George Schmatzinetz, 802 Grant street.

\*No. 15, Jersey City, N. J.—Meets first and third Fridays of each month at Filler's Hall, Palisade avenue, near Elevated R. R. President, H. S. Farrell, 109 Fourteenth street, Hoboken, N. J.; recording secretary, J. J. Byrne, 1218 Park ave., care Wilson; financial secretary, A. H. Wilson, 1218 Park avenue, Hoboken, N. J.

\*No. 16, Evansville, Ind.—Meets every Friday night at Private Hall or rooms, 813½ Upper Third street. President, E. E. Hoskinson, 925 East Indiana street; recording secretary, S. H. Lockett, 216 Upper Second street; financial secretary, E. W. Dyer, 125 Upper Seventh street.

†No. 17, Detroit, Mich.—Meets every Monday evening at Johnson's Hall, 34 Monroe avenue. President, George Burns, 439 Magnolia street; recording secretary, Edw. G. Smith, 32 Farmer street; secretary-treasurer F. W. Stubenvoll, 90 Noble street.

†No. 18, Kansas City, Mo.—Meets every Monday evening, at 1333 Grand avenue. President, E. A. Newell, 610 E. 10th street; recording secretary, Claude Seaman, 2201 Park avenue; financial secretary, Neil Callahan, 1818 Forrest avenue.

\*No. 19, Atchison, Kans.—Meets second and fourth Fridays, Labor Union Hall, Seventh and Commercial streets. President, E. Emory, Mo. and Kans. Tel. Co.; recording secretary, O. B. Gilmore, 614 N. Sixth street; financial secretary, R. M. Dougherty, 501 Commercial street.

†No. 20, New York City.—Meets every Tuesday night at Military Hall, 193 Bowery. President, T. J. Convery, 193 Bowery; recording secretary, W. D. Hubbard, 193 Bowery; financial secretary, P. McLaughlin, 149 N. Portland avenue, Brooklyn.

†No. 21, Philadelphia, Pa.—Meets every Friday at Elks' Hall, 232 North Ninth street. President, Edw. E. Ferry, 841 Church Lane; recording secretary, H. C. McClannahan, 509 Race street; financial secretary, T. Wotocheck, 192 W. Norris street.

†No. 22, Omaha, Nebr.—Meets first and third Wednesdays of each month at Labor Temple, Fifteenth and Dodge streets. President, Chas. Granden, 1502 N. Nineteenth street; recording secretary, H. P. Kerr, 2245 N. Nineteenth street; financial secretary, J. Corr, 4123 No. Twenty-fourth street.

\*No. 23, St. Paul, Minn.—Meets first and third Mondays at Federation Hall, Third and Wabasha streets. President, Edward Rowan, 715 Lee avenue; recording secretary, C. W. Berryman, 650 Rice street; financial secretary, J. B. Hilton, P. O. Box 232, North St. Paul, Minn.

†No. 24, Minneapolis, Minn.—Meets second and fourth Tuesdays at Union Temple, 26 So. Washington avenue. President, A. H. Sellars, 127 E. 25th street; recording secretary, Frank Flanagan, 811 Fifth street, south; financial secretary, John J. Reynolds, 2316 Fourth ave., south.

\*No. 25, Terre Haute, Ind.—Meets every Tuesday at C. L. U. Hall, 626½ Wabash ave. President, A. R. Markle, 1027 Seventh avenue; recording secretary, C. Shoaf, Citizens Tel. Co.; financial secretary, Lee Dickerson, 509 S. Thirteenth street.

†No. 26, Washington, D. C.—Meets every Thursday, corner Sixth and G streets, N. W. President, C. Yeabower, 404 I street, N. E.; recording secretary, E. A. Nelson, Jr., 1323 F street, N. E.; financial secretary, A. Longpre, 1332 Eighth street.

†No. 27, Baltimore, Md.—Meets every Monday evening at Border State Bank building, Park avenue and Fayette street. President, A. Rutledge, 716 St. German street recording secre.

tary, G. W. Spillman, 1219 Carroll street; financial secretary, J. Connelly, 1728 N. Bond street.

†No. 28, Baltimore, Md.—Meets every Thursday at 8 p. m. at Trades' Union Hall, 848 No. Calvert street. President, W. W. Welsh, 1520 E. Preston street; recording secretary, P. R. Bruce, 1026 No. Stricker street; financial secretary, Geo. J. Schmidt, 241 Milton avenue.

\*No. 29, Trenton, N. J.—Meets every Tuesday evening at Ribson building, corner S. Broad and W. Front streets. President, Chas. Gordon, 82 Chapel street; recording secretary, Wm. M. J. Wood, 60 W. End ave.; financial secretary, J. M. Clery, 111 Roebbling avenue.

†No. 30, Cincinnati, Ohio.—Meets every second and fourth Wednesday at Cosmopolitan Hall, 1318 Vine street. President, Virgil Burbridge, 1787 Denham street; recording secretary, Fred. Seidel, 2322 Harrison avenue; financial secretary, C. A. Palmer, 4222 Cherry street.

\*No. 31, Duluth, Minn.—Meets first, third and fifth Thursday of each month, in Axa Building, 221 West Superior street. President, E. J. Damers, Duluth, Minn.; recording secretary, C. W. Higgins, 418 8th ave. west; financial secretary, W. L. Otis, 114 South 15th ave., east.

\*No. 32, Lima, Ohio.—Meets first and third Tuesdays at Donze Hall, South Main street. President, Harry Davidson, 321 McPherson avenue; recording secretary, Charles L. Stoutt, 854 E. North street; financial secretary, Ed. Wentworth, 681 W. Kibbey street.

\*No. 33, New Castle, Pa.—Meets every Wednesday night at G. A. R. Hall, corner of East and Washington streets, third floor. President, S. A. Wilkinson, Crawford ave.; recording secretary, F. D. Kingsley, 68 Pearson street; financial secretary, F. L. Truby, rear 124 Neshannock ave.

†No. 34, Peoria, Ill.—Meets first and third Mondays at Pettitt's Hall, 209 Liberty street. President, Geo. M. Akers, 1808 Lincoln avenue; recording secretary, F. W. Mattlin, Kelley's Hotel, 110 Adams street; financial secretary, E. Peek, 1001 Monroe street.

\*No. 35, Massillon, Ohio.—Meets second and fourth Wednesdays at Trades' and Labor Assembly Hall, McAymonds Block. President F. F. Flickinger, 188 Richville avenue; recording secretary, R. S. Hardgrove, 22 E. Charles street; financial secretary, A. Shorb, 382 West Tremont street.

†No. 36, Sacramento, Cal.—Meets Friday night at 1019 J street. President, W. H. Eastman; recording secretary, A. McDonald, 2530 M street; financial secretary, J. Noonan, 1120 Twentieth street.

†No. 37, Hartford, Conn.—Meets every Thursday in Foster Block, Room 10, 244 Asylum street. President, William Delair, 98 Trumbull street; recording secretary, John Bartlett, 51 Adline street; financial secretary, Maurice Collins, 32 Ailyn street.

†No. 38, Cleveland, Ohio.—Meets every Tuesday at Foresters' Hall, 228 Champlain street. President, R. W. McIntyre, 176 Lakewood avenue; recording secretary, Wm. J. Young, 390 Prospect street; financial secretary, Frank Estinghausen, 83 Prospect street.

\*No. 39, Cleveland, Ohio.—Meets every Thursday at Arch Hall, 393 Ontario street. President, F. Hall, 88 Elton street; recording secretary, Geo. H. Gleason, 83 Prospect street; financial secretary, F. J. Sullivan, 83 Prospect street.

\*No. 40, St. Joseph, Mo.—Meets Wednesday at A. O. U. W. Hall, 8th and Locust streets. President, Charles A. Waller, City Plant, Fifth and Olive streets; recording secretary, Wm. Dorsel, 1710 Calhoun street; financial secretary, Chas. B. Ellis, 1202 North Third street.

†No. 41, Buffalo, N. Y.—Meets every Thursday at Council Hall, cor. E. Huron and Ellicott streets. President, L. L. Mills, 564 W. Utica street; recording secretary, E. W. Brown, 300 Vermont street; financial secretary, George Wallser, 115 West avenue.

†No. 42, Utica, N. Y.—Meets first and third Fridays, at Labor Temple, 18 Hotel street. President, A. Durr, 8 Louise street; recording secretary, C. R. Stringer, 22 Cornelia street; financial secretary, Geo. Grimsfield, 48 Cooper street.

†No. 43, Syracuse, N. Y.—Meets Fridays at Bartenders' Hall, Empire Block, West Genesee street. President, Carl Kinney, 416 P. O. Box; recording secretary, James A. Andrews, 518 N. Salina street; financial secretary, John Kerwin, 105 Belmont avenue.

\*No. 44, Rochester, N. Y.—Meets every other Wednesday at Electrical Workers' Hall, 86 State street. President, J. Desmond, 283 Glenwood avenue; recording secretary, P. H. Brennan, 42 Bartlett street; financial secretary, L. H. Kelly, 557 North street.

†No. 45, Buffalo, N. Y.—Meets second and fourth Saturdays at Schwarts' Hall, corner Goodell and Washington streets. President, James Shane, 78 South Division street; recording secretary, C. W. Brown, 120 Demond Place; financial secretary, J. E. McCadden, 255 Seventh street.

†No. 46, Baltimore Md.—Meets every Wednesday evening at 8:30 at 410 E. Fayette street. President, W. W. Mead, 941 W. Lexington street; recording secretary, R. J. Stewart, 763 W. Fayette street; financial secretary, C. V. Bahmer, 205 N. Fremont street.

\*No. 47, Sioux City, Iowa.—Meets first and third Wednesday of each month at B. T. C. Hall, over 412 and 414 Douglas street. President, Arthur G. Garton, Vendome Hotel; recording secretary, N. J. Nelson, 1123 West Third street; financial secretary, Bert J. Boucher, Vendome Hotel.

\*No. 48, Richmond, Va.—Meets every Tuesday night, at McDonough's Hall, 700 W. Broad street. President, L. J. Johnson, 6 Seventh street; recording secretary, F. A. Fry, 608 1/2 China street; financial secretary, J. D. Hamilton, 812 Brooks avenue.

†No. 49, Chicago, Ill.—Meets first and third Wednesdays, at 86 Madison street. President, J. Hodges, 6316 Jackson Park ave.; recording secretary, C. Cornell, 882 West Erie street; financial secretary, J. C. Jensen, 5841 Shields avenue.

\*No. 50, Belleville, Ill.—Meets second and fourth Tuesdays at Antlers' Hall, A and Spring streets. President, Henry Christian, 103 East Main street; recording secretary, James Workman, 117 South Church street; financial secretary, F. W. Stark, 519 East C street.

†No. 51, Monclova, Coahuila Mex.—Meets fourth Sunday at Trades Assembly, Estacion Monclova, Mex. President, F. B. Wallace, Monclova, Coahuila; recording secretary, W. B. Dukes, Jaral, Coah., Mex.; financial secretary, J. T. Morrissey, Estacion, Monclova, Coah., Mex.

†No. 52, Newark, N. J.—Meets Monday nights at Electrical Workers' Hall, 236 Washington street. President, C. P. Taylor; recording secretary, F. Rosseter, 187 Sherman avenue; financial secretary, Edmund L. Beatty, 304 S. Ninth street.

\*No. 53, Harrisburg, Pa.—Meets every Thursday at Holtsman's Cigar Store, 315 South Market street. President, Andrew C. Shaeffer, 223 Locust street, Steelton Pa.; recording secretary, Chas. S. Ebersole, 183 South Fourteenth street; financial secretary, Carl A. E. Andersen, 46 Summit street.

\*No. 54, Columbus, Ohio.—Meets every Thursday evening, at Winter's Hall, 141 1/2 E. Main street. President, Ed. Day, Citizens Telephone Co.; recording secretary, D. C. Hagerty, 1100 Summit street; financial secretary, J. A. Pilger, 2498 Medary avenue.

\*No. 55, Des Moines, Iowa.—Meets every Thursday night at Trades' and Labor Assembly Hall, between Seventh and Eighth on Locust street. President, C. J. Keller, 722 Eighth street; recording secretary, H. Frazey, 950 Fifth street; financial secretary, Charles Ladin, Thirty-eighth street and Woodland avenue.

\*No. 56, Erie, Pa.—Meets first, third and fifth Mondays at C. M. B. A. Hall, 721 State street. President, H. M. Kistner, Moore House; recording secretary, Jas. Higgins, 118 E. Fourth street; financial secretary, Jas. J. Reid, 1309 Sassafras street.

†No. 57, Salt Lake City, Utah.—Meets every Thursday evening at Electrical Workers' Hall, 11 West First street, South. President, Robert Shipman, Box 402; recording secretary, H. M. Murray, Box 402; financial secretary, J. R. Currie, Box 402.

\*No. 58, **Niagara Falls, N. Y.**—Every Friday at Mayle Hall, 723 Third street. President, William watts, 1629 Whirlpool street; recording secretary, H. W. Davis, 2202 Main street; financial secretary, C. P. Mingay, 1202 Center avenue.

†No. 59, **St. Louis, Mo.**—Meets Mondays at 8 p. m. at Lightstone's Hall, 1028 Franklin avenue. President, Henry Kunderb, 3440 California avenue; recording secretary, W. D. McSorley, 1446 North Twenty-first street; financial secretary, E. N. Hardy, 2818A Locust street.

\*No. 60, **San Antonio, Tex.**—Meets first and third Saturdays at Red Men's Hall, St. Mary's street. President, J. P. Broderick, 722 South Pine street; recording secretary, W. E. Freeman, 303 Maverick street; financial secretary, John Thompson, 319 Lubock street.

†No. 61, **Los Angeles, Cal.**—Meets every Thursday at Council of Labor Hall, 438½ South Spring street. President, J. S. Marsh, 810 North Soto street; recording secretary, Gus Wardman, 842½ Fremont street; financial secretary, S. D. Voorhees, 976 East Thirty-first street.

\*No. 62, **Youngstown, Ohio.**—Meets first and third Tuesdays at Finn's Hall, northwest corner of Public Square. President, C. A. Onstott, 613 Covington street; recording secretary, M. McCabe, 245 East Rayen avenue; financial secretary, Bert Beaver, 212 Belmont avenue.

\*No. 63, **Warren, Pa.**—Meets first and third Fridays at K. of H. Hall, Second street. President, C. W. Simpson, Warren, Pa.; recording secretary, Otto Bartsels, East Water street; financial secretary, N. H. Spencer, Box 1094.

†No. 64, **Youngstown, Ohio.**—Meets every second and fourth Wednesday night at Finn Hall, Public square. President, Wm. Cavanaugh, corner Edward and Mt. Pleasant street; recording secretary, C. F. Richards, 736 Lydia street; financial secretary, W. H. Griffith, 786 Crossman avenue.

\*No. 65, **Butte, Mont.**—Meets first and third Saturdays at I. O. G. T. Hall, West Broadway. President, L. E. Woodworth, P. O. Box 846; recording and financial secretary, F. W. Cochrane, P. O. Box 846.

\*No. 66, **Houston, Tex.**—Meets first and third Wednesdays at Labor Hall, corner Preston and Caroline streets. President, J. H. Shippe, 1010 Prairie avenue; recording secretary, A. A. Taylor, 811 Bell avenue; financial secretary, T. M. Flavin, 2601 Rannels avenue.

\*No. 67, **Quincy, Ill.**—Meets second and fourth Thursday at Trade and Labor Hall, 619 Main street. President, L. S. Hull, 1815 Vermont street; recording secretary, F. G. Ernest, 828 Madison street; financial secretary, J. W. Redmond, 643 South Fourth street.

†No. 68, **Denver, Colo.**—Meets every Monday at 218 Charles Block, Fifteenth and Curtis streets. President, L. E. Norquist, 3331 Clayton street; recording secretary, G. G. Macy, P. O. Box 614; financial secretary, C. A. Nickerson, P. O. Box 514.

†No. 69, **Dallas, Tex.**—Meets every Thursday night at Labor Temple, 401 Main street. President, L. D. Short, 224 Columbia avenue; recording secretary, R. R. Richards, 556 Elm street; financial secretary, George W. Smith, 239 North Lancaster street.

\*No. 70, **Cripple Creek, Colo.**—Meets every Wednesday at Electrical Workers' Hall, Fairley & Lampman block. President, T. N. Jones, Box 684; recording secretary, Chas. Sallstrom, Box 684; financial secretary, E. P. Steen, Box 684.

†No. 71, **Lancaster, Pa.**—Meets second and last Sunday mornings at 9:30 in Central Labor Union Hall, S. Queen and Mifflin streets. President, James W. Brann, 315 W. James street; recording secretary, Wm. R. Bair, 341 E. Walnut street; financial secretary, Wm. O'Connors, 446 South Christian street.

\*No. 72, **Waco, Tex.**—Meets second and fourth Saturday nights at Labor Hall, Sixth and Franklin streets. President, J. P. Blystone, 518 Novcity street; recording secretary, F. B. Wornack, 805 Franklin street; financial secretary, J. E. Caple, 411 Washington street.

\*No. 73, **Spokane, Wash.**—Meets every Monday Central Labor Hall, First and Post streets. President, W. A. Davis, South Post, between Third and

Fourth streets; recording secretary, M. McCain, 1503 Mallon avenue; financial secretary, D. W. Eberlin, 2514 E. Sixth avenue.

\*No. 74, **Winona, Minn.**—Meets first and third Thursdays at Electrical Workers' Hall, 67 East Third street. President, George Morrison, 510 Olmstead street; recording secretary, John P. Fromm, 467 East Fourth street; financial secretary, H. B. Kline, 510 Olmstead street.

†No. 75, **Grand Rapids, Mich.**—Meets Second and fourth Thursdays at Lockerbey Hall, No. 3, Fountain street. President, C. Lawrence; recording secretary, F. J. Dickerson, 20 Turner street; financial secretary, J. Maskel, 93 James street.

\*No. 76, **Tacoma, Wash.**—Meets first and third Saturdays in Union Hall, 721 Commerce streets. President, A. M. Craig, South Fifty-eighth and O streets; recording secretary, J. E. Willis, 4121 Thomson avenue; financial secretary, C. A. Young, 4110 Yakima avenue.

†No. 77, **Seattle, Wash.**—Meets every Thursday at Musicians' Hall, 1420 Second avenue. President, John S. Wilson, 1818 Ninth avenue; recording secretary, C. J. Knago, 116 Tenth avenue, north; financial secretary, Geo. W. Walters, 222 Sixth avenue, north.

†No. 78, **Chicago, Ill.**—Meets first and third Fridays of each month at 155 East Randolph street. President, E. J. Cassin, 1091 South St. Louis avenue; recording secretary, Fred Cohrs, 5625 Dearbon street; financial secretary, G. H. Foltz, 875 Clifton Park avenue.

\*No. 79, **Syracuse, N. Y.**—Meets first and third Mondays at Myers' Hall, corner of East Genesee and Montgomery streets. President, Edward Gyiatt, 115 Burnet avenue; recording secretary, Cornelius O'Connor, 503 Hawley avenue; financial secretary, Edward Greene, 132 Mary Alley.

\*No. 80, **Norfolk, Va.**—Meets every Tuesday at I. B. E. W. Hall, 268 Main street. President, H. A. Brock, P. O. Box 232; recording secretary, J. H. T. Smith, P. O. Box 232; financial secretary, E. E. Mathews, P. O. Box 232.

\*No. 81, **Scranton, Pa.**—Meets first and third Monday at Street Car Men's Hall, 22 Lackawana avenue. President, T. B. Sturdevant, 905 Cedar avenue; recording secretary, Harry E. Finno, 331 Franklin avenue; financial secretary, D. Lavery, 333 Franklin avenue.

\*No. 82, **Henderson, Ky.**—Meets first and third Tuesdays in each month in Powers' Hall, First street. President, A. F. Braum, 327 Second street; recording secretary, H. B. Jones, 219 Green street; financial secretary, A. J. Quinn, 318 N. Elm street.

\*No. 83, **Milwaukee, Wis.**—Meets every Friday at Lipp's Hall, corner Third and Prairie streets. President, J. R. Barry, 1326 Fon Du Lac avenue; recording secretary, O. A. Blackwood, 829 Franklin street; financial secretary, Nick Daleiden, 848 Thirty-third street.

\*No. 84, **Atlanta, Ga.**—Meets every Tuesday in Federated Trades Hall. President, George W. Otwell, 78 Marietta street; recording secretary, J. Abbott, 101 Capitol avenue; financial secretary, A. R. Rogers, 421 Central avenue.

\*No. 85, **Sault Ste. Marie, Ontario, Can.**—Meets every second and fourth Thursday at Turner Block, Queen and Brock streets, Northwest. President, R. C. Duffin, Sault Ste. Marie, Ont.; recording secretary, H. Lamberton, Sault Ste. Marie, West P. O.; financial secretary, R. B. Johnston, P. O. Box 470, Sault Ste. Marie, Ont.

†No. 86, **Rochester, N. Y.**—Meets every Monday at Electrical Workers Hall, 86 State street. President, W. W. Johnson, 49 Hudson street; recording secretary, H. E. Erhardt, 15 Lamber-ton Park; financial secretary, A. C. Beggy, Centennial building.

†No. 87, **Newark, N. J.**—Meets every Friday at Electrical Workers' Hall, 236 Washington street. President, W. McDonald, 332 Bank street; recording secretary, J. Leger, 380 S. Orange ave.; financial secretary, F. R. Greenwood, 50 Clinton street.

\*No. 88, **Savannah, Ga.**—Meets second and fourth Monday evenings at Odd Fellows Hall, corner President and Whitaker streets. President, J. R. Dargon, Box 316; recording secretary, J. Farbstain, Box 316; financial secretary, A. C. Bruecmann, Box 316.

*April 1904*

\*No. 89, Akron, Ohio.—Meets every other Friday at 39 Viaduct. President, G. M. Swarts; recording secretary, F. F. Loomis; 111 Viaduct.

†No. 90, New Haven, Conn.—Meets every Saturday evening at Forester's Hall, 781 Chapel street. President, Frank Horan, 57 Washington avenue; recording secretary, J. J. Wheeler, 156 Congress avenue. financial secretary, Frank Tanner, 156 Congress avenue.

\*No. 91, Easton, Pa.—Meets second and fourth Friday nights at Easton Journal Building, Church street between Sitgreaves and North Third streets. President, George Strouse, Summit avenue, Phillipsburg N. J.; recording secretary, T. A. Martin, 308 Wilkesbarre street; financial secretary, W. C. Pearce, 40 Wilkesbarre street.

\*No. 92, Hornellsville, N. Y.—Meets second and fourth Saturdays in each month at B. of R. T. Hall, Arcade Building. President, C. M. Kelly, Hornellsville Tel. Co.; recording secretary, Harry S. Brown, Hornellsville Tel. Co.; financial secretary, W. J. Cherry, Hornellsville Tel. Co.

\*No. 93, East Liverpool, O.—Meets every Wednesday night, in Smith-Fowler Building, on Diamond. President, H. Hetzel, corner Robinson and Walnut streets; recording secretary, S. G. Cowles, P. O. Box 382; financial secretary, R. C. Baxter, 178 Monroe streets.

\*No. 94, Kewanee, Ill.—Meets second and fourth Saturday nights each month at Federation Hall, 218 N. Tremont st. President, E. R. Hashinger, 307 W. Division st.; recording secretary, Wm. H. Finley, 404 Rice street; financial secretary, Wm. Finley.

\*No. 95, Joplin, Mo.—Meets every Thursday night at Labor Hall, Sixth and Wall streets. President, L. L. Haggard, 508 Amanda avenue; financial secretary, Chas. Nelson, Box 461.

\*No. 96, Worcester, Mass.—Meets every Monday at Piper Hall, 419 Main street. President, L. D. Bull, 422 Park avenue; recording secretary, S. B. Wilker, 19 Shafner street; financial secretary, S. A. Strout, 419 Main street.

\*No. 97, Mt. Vernon, O.—Meets every first and third Saturday night, at Quindaro, I. O. O. F. Hall, South Main street. President, F. D. Morrison, Mt. Vernon, Ohio; recording secretary, J. C. Jacobs, Mt. Vernon, Ohio; financial secretary, O. D. Layman, Ridgewood avenue.

†No. 98, Philadelphia, Pa.—Meets every Tuesday night at Elks' Hall, 232 N. Ninth street. President, G. Coleman; recording secretary, F. Peterson; financial secretary, Jas. S. Meade, 1821 Arch street.

†No. 99, Providence, R. I.—Meets every Monday night at Hanley Hall, 68 Washington street. President, A. W. Seavey, No. 1 Falcon street; recording secretary, R. A. Ripley, 1 North Court street; financial secretary, J. Herbert Bailey, 33 Douglass street.

\*No. 100, Jacksonville, Fla.—Meets Thursdays at B. T. C. Hall, Bay street. President, G. B. Lampkin, General Delivery; recording secretary, I. E. Salehwell, 740 W. Monroe street; E. J. McDonnell, 702 W. Adams street.

†No. 101, Middletown, N. Y.—Meets second and third Thursdays, in Times building, King and Center streets. President, John Ayres, Central Building, North street; recording secretary, J. V. Callaghan, 37 Beattie, avenue; financial secretary, C. J. Cunningham, 6 Knapp avenue.

†No. 102, Paterson, N. J.—Meets every Thursday evening at Helvetia Hall, 56 Van Houten street. President, Frank H. Hopper, 50 Haledon avenue; recording secretary, N. Merrick, 74 Bloomfield avenue; financial secretary, R. Clark, 37 Benson street.

†No. 103, Boston, Mass.—Meets every Wednesday at Dexter Hall, 387 Washington street. President, L. W. E. Kimball, 5 Medland street, Dorchester, Mass.; recording secretary, Fred J. Reardon, 48 Mystic street, Charlestown, Mass.; financial secretary, John W. Barton, 126 Cherry street, Chelsea, Mass.

†No. 104, Boston, Mass.—Meets every Tuesday at Appleton Hall, 9 Appleton street. President, Michael Birmingham, 37 Brackett street, Brighton, Mass.; recording secretary, John A. McInnis, 23 Oak Grove Terrace, Roxbury, Mass.; financial secretary, Leod MacLeod, 107 Main street, Winchester, Mass.

\*No. 105, Hamilton, Ont.—Meets second and fourth Thursday at Trades and Labor Hall, 17 Main street, East. President, Chas. H. Fry, 114 N. Ferguson avenue; recording secretary, R. S. Wm. Smith, cor. Barton and Sherman Ave. F. S., Frank J. Grace, 26 Barton st., E.

\*No. 106, Jamestown, N. Y.—Meets Monday evening at Warner Block, Room 9, second floor. President, W. J. Bell, Hotel Ellicott; recording secretary, George H. Leburg, 802 East Second street; financial secretary, Wm. J. Torrey, 44 Park street, Jamestown, N. Y.

\*No. 107, Pittsburg, Kans.—Meets every Tuesday at Schielferbine Hall, Sixth and Broadway. President, Thomas Frew, 603 E. Seventh street; recording secretary, Rex Camblin; general delivery; financial secretary, Paul Mattingly, care Home Telephone Co.

\*No. 108, Tampa, Fla.—Meets every Thursday night at Labor Union Hall, Franklin and Fortune streets. President, Jas. A. Arnold, 108 Cass street; recording secretary, James T. Maxon, Florida avenue and Scott street; financial secretary, John F. Vaughan, W. Twelfth ave.

†No. 109, Davenport, Iowa.—Meets every Thursday night at Danish Brotherhood hall, 607-609 W. Fourth streets. President, Clifton Perry, 523 Brady street; recording secretary, Joseph Lundsey, 406½ West Second street; financial secretary, Jas. Dallner, 202 East Fifth street.

\*No. 110, Sandusky, Ohio.—Meets first and third Friday nights at Fusch's Hall, corner of Monroe and Fulton streets. President, C. McNeal, Jefferson street; recording secretary, Wm. Windisch, 506 Pearl street; financial secretary, Chas. Littleton, 321 Scott street.

\*No. 111, Honolulu, Hawaii.—Meets first and third Thursdays at 7.30 p. m., Brooklyn Hall, Alaken between Queen and Merchant streets. President, Carl M. Taylor, Box 661; recording secretary, John Trueman, Hawaiian Electric Co.; financial secretary, A. R. G. McCormick, 1124 Adams Lane.

\*No. 112, Louisville, Ky.—Meets every Tuesday night at Germania Hall, 107 W. Jefferson street. President, Joe E. Bryant, 1624 Wilson; recording secretary, H. W. Rowlett, R. F. D. 2; financial secretary, F. H. Weaver, 788 Washington street.

†No. 113, Colorado Springs, Colo.—Meets every Friday, 122 Cucharas street. President, Jas. English, 5 E. Moreno street; recording secretary, Wm. Waldron, 122 E. Cucharas street, financial secretary, H. T. Paschal, P. O. box 1067.

†No. 114, Toronto, Can.—Meets first and third Wednesdays at Temple Building, corner Bay and Richmond streets. President, W. J. Middleton, F. Shaftsbury avenue; recording secretary, W. 18 Partello, 24 Louisa street; financial secretary, G. C. Beckett, 61 Duke street.

\*No. 115, Austin, Tex.—Meets second and fourth Wednesdays at Trades Council Hall, over 1000 Cong. avenue. President, Geo. R. Felter, 110 W. avenue; recording secretary, E. D. Bralley, 509 Long ave.; financial secretary, B. B. Beard, 907 E. Third street.

†No. 116, Los Angeles, Cal.—Meets every Tuesday at Brents Hall, 534½ South Spring street. President, M. S. Culver, 766 Maple avenue; recording secretary, E. Powelson, Station B; financial secretary, H. M. Scott, 547 Fickett street.

\*No. 117, Elgin, Ill.—Meets first and third Thursday, at Trades Council Hall, 102 Douglas avenue. President, I. C. Burney, 316 North Crystal street; recording secretary, T. H. Bryson, 226 Wellington avenue; financial secretary, C. A. Soper, 719 Highland avenue.

\*No. 118, Dayton, O.—Meets every Thursday night at Dister Post Hall, 25 North Main street. President, C. Y. Lohnes, 112 Leonard street; recording secretary, A. A. MacDonald, 123 West Fifth street; financial secretary, Andy Laughman, 92 Wheatly street.

†No. 119, Far Rockaway, L. I.—Financial secretary, A. E. Funnell, 21 Shepherd avenue, Brooklyn, N. Y.

\*No. 120, London, Ont.—Meets third Tuesday in each month at Oriental Hall, Clarence street. President, G. Upshall, 569 William street; recording secretary, L. R. Folley, 189 Wellington street; financial secretary, G. H. Porter, box 385.

†No. 121, Denver, Col.—Meets every Wednesday at Charles Bldg., room 202, Fifteenth and Curtis streets. President, B. A. Reser, 2410 Stout street; recording secretary, S. H. Cleary, 1218 W. Fourteenth street; financial secretary, S. H. Phillips, 1627 S. Emerson street.

\*No. 122, Great Falls, Mont.—Meets Monday at Phelps' Building, corner Third street and Central avenue. President, F. D. Warde, Box 385; recording secretary, A. N. Thomas, Box 385; financial secretary, E. W. Frost, Box 385.

\*No. 123, Wilmington, N. C.—Meets every Wednesday night at First National Bank Building, corner Front and Princess streets. President, James Sutton, general delivery, Wilmington; recording secretary, E. C. Yarbrough, care So. Bell Tel. Co., Wilmington; financial secretary, E. C. Yarbrough.

\*No. 124, Galveston, Tex.—Meets second and fourth Fridays at Cooks' and Walters' Hall, 307½ Tremont street. President, Jos. Cohen, 18 Post Office street; recording secretary, Ed. F. Parks, Atlanta Hotel; financial secretary, John A. Rotter, 38th street between M and M½.

\*No. 125, Portland, Ore.—Meets every Wednesday at Painters' Hall, No. 234½ Morrison street. President, Wm. Morris, 68 Seventh street; recording secretary, C. F. Canfield, 76 W. Park street; financial secretary, W. T. Patton, 820 E. Stark street.

\*No. 126, Little Rock, Ark.—Meets first and third Tuesday, at Labor Temple, Second and Main streets. President, Al. W. Kingsowiny, 1222 Main street; recording secretary, W. H. Halliburton, Jr., 1419 Park avenue; financial secretary, E. T. Reynolds, 1422 Battery street.

†No. 127, New Rochelle, N. Y.—Meets second and last Friday in each month at Zippnick Hall, No. 10 Mechanic street. President, R. K. Johnson, No. 8 Lawton street; recording secretary, H. B. Miller, 47 Gulon Place; financial secretary, John Hughes, No. 115 Church street.

\*No. 128, Alton, Ill.—Meets every first and third Friday at Squire Nathan's Law office, Second and Market streets. President, Curtis Hayes, 1240 Narrow street; recording secretary, Cy. Perkins, 618 State street; financial secretary, H. Paul Jewett, Third and Market streets.

\*No. 129, Nashville, Tenn.—Meets every Saturday night at Labor Advocate Hall. President, C. Snider, 301 Church street; recording secretary, B. R. Johnson, 301 Church street.

†No. 130, New Orleans, La.—Meets every Thursday at 7 p. m., at Carpenter's Hall, St. Charles street near Paydrass. President, W. F. Ragan, 2210 Beenville street; recording secretary, W. M. Fisher, 615 Third street; financial secretary, H. W. Thomas, 5238 Constance street.

†No. 131, Traverse City, Mich.—Meets second and fourth Tuesdays in month in Montague Hall, 127 E. Front street. President, A. Tolhurst, 323 W. Eleventh street; recording secretary, L. V. Beattie, 1011 E. Front street; financial secretary, Frank Alvord, 314 S. Division street.

†No. 132, South Bend, Ind.—Meets every two weeks on Monday evenings at Central Labor Hall, South Michigan street. President, Geo. N. Bams, 836 N. Main street; recording secretary, Wm. F. Qualls, Home Tel. Co.; financial secretary, N. J. Shoemaker, P. O. Box 803.

†No. 133, Detroit, Mich.—Meets every Wednesday night at Johnston's Hall, 34 Munroe avenue. President, F. W. Raymond, 550 Baker street; recording secretary, Stanley C. Wilson, 122 W. Milwaukee avenue; financial secretary, W. F. Tewksbury, 274 Porter street.

†No. 134, Chicago, Ill.—Meets every Thursday night at 196 East Washington street. President, Chas. L. White, 934 Monticello avenue; recording secretary, George O. Johnson, 196 Washington street; financial secretary, J. B. Wilson, 196 Washington street.

\*No. 135, La Crosse, Wis.—Meets every second and fourth Fridays of each month at Bartles Hall, Jay street, bet. Fourth and Fifth. President, B. A. Emerton, 333 North Ninth street; recording secretary, C. A. Dittman, 315 N. Tenth street; financial secretary, Charles H. Yates, 552 North Eighth street.

\*No. 136, Birmingham, Ala.—Meets first and third Fridays at Labor Temple, Twenty-first

street. President, F. C. Powell, 3615 avenue C; recording secretary, R. S. Boke, 322 53rd street, Woodlawn, Ala.; financial secretary, F. S. Williams, 600 John street.

†No. 137, Albany, N. Y.—Meets second and fourth Tuesdays of month at Hudson avenue and Broadway. President, Benj. B. Smith, 270 Washington ave.; recording secretary, Jas. H. Crook, 178 Livingston avenue; financial secretary, G. D. Marmom, 238 N. Pearl street.

\*No. 138, Fort Wayne, Ind.—Meets second and fourth Thursdays at K. of L. Hall, Court street. President, P. B. Merz, 511 Holman street; recording secretary, E. J. Fisher, 127 E. Washington street; financial secretary, D. Mullen, 200 N. Barr street.

\*No. 139, Elmira, N. Y.—Meets second and fourth Sundays at Federation of Labor Hall, 332 Carroll street. President, Benj. R. Phillips, 813 E. Second street; recording secretary, John Marvin, 609 East Church street; financial secretary, J. K. Packard, 372 West Fifth street.

\*No. 140, Schenectady, N. Y.—Meets first and third Wednesdays at Carpenter's Hall, State street. President, John H. Reed, 439 S. Center street; recording secretary, F. G. Lanfair, 119 Clinton street; financial secretary, J. J. Dowling, corner Clinton ave. and Northern Boulevard, Albany, N. Y.

†No. 141, Wheeling, W. Va.—Meets every Friday night at Peabody Building, Room 207, Market street, between Eleventh and Twelfth streets. President, Eugene Hagen, 804 Market street; recording secretary, Ross Miller, 71 Sixteenth street; financial secretary, Earle C. Bell, 167 Fourteenth street.

†No. 142, Wheeling, W. Va.—Meets every Wednesday at I. B. E. W. Hall, Room 207 Peabody Building, Market street. President, J. W. Bradfield, Martins Ferry, Ohio; recording secretary, Geo. Wey, 189 Fifteenth street; financial secretary, W. A. Kent, 1412 Market street.

\*No. 143, Ashtabula, O.—Meets second and fourth Mondays, at C. L. U. Hall, Newbury Block, corner Main and Center streets. President, S. D. Eckler, 15 Tyler avenue; recording secretary, C. A. Amy, 17 Sycamore street; financial secretary, O. Myers, care Ashtabula Tel. Co.

\*No. 144, Wichita, Kan.—Meets every Thursday night at Red Men's Hall, 400 East Douglas. President, T. L. Roberts, 314 N. Hydraulic street; recording secretary, Philip F. Kennie, care Western Union; financial secretary, S. C. Pratt, 710 S. Market street.

\*No. 145, Saginaw, Mich.—Meets Wednesday night at Engineer's Hall, 218 Genesee avenue. President, J. Crandall, 1103 S. Warren avenue; recording secretary, F. Smith, 923 Jackson street; financial secretary, B. Gaberia, 1300 S. Fourth street.

\*No. 146, Bridgeport, Conn.—Meets Wednesday of each week at Royal Arcanum Hall, 1106 Main street. President, J. T. Rooney, P. O. box 623; recording secretary, J. W. Peck, P. O. box 623; financial secretary, Michael McMahon, 867 Main street.

\*No. 147, Anderson, Ind.—Meets every Friday night at Bricklayer's Hall, 909 Main street. President, H. C. Minor, care D. & M. Tel. Co.; recording secretary, F. Hess, D. & M. Tel. Co.; financial secretary, O. Kendall, 510 W. Ninth street.

†No. 148, Washington, D. C.—Meets Monday night at Royal Hall, 1301 Seventh street north west. President, J. F. Dixon, 419 A street north east; recording secretary, E. M. Grimsley, 1408 Georgia avenue southeast; financial secretary, M. V. Murphy, 808 Fifth street northeast.

\*No. 149, Aurora, Ill.—Meets second and fourth Tuesdays at Trade's Assembly Hall, on Island. President, Robert Gilmore, 228 S. Broadway; recording secretary, E. A. Wood, 218 Benton street; financial secretary, Ed. Millhouse, 23 North Broadway.

\*No. 150, Bay City, Mich.—Meets second and fourth Tuesdays at A. O. U. W. Hall, corner Center and Adams streets. President, Jas. Hodgins, 1317 Eleventh street; recording secretary, W. D. Parker, Essexville, Bay County, Mich.; financial secretary, Charles Crampton, City Hall, Bay City, Mich.



†No. 151, San Francisco, Cal.—Meets every Tuesday at Machinist's Hall, 1159 Mission near Eighth street. Headquarters, 921 Market street. Pres. H. B. Taylor, 605 Post St.; recording secretary, Wm. Coyle, 1726 12th ave.; So.; financial secretary, James C. Kelly, 50 Webster street.

\*No. 152, Ft. Scott, Kan.—Meets first and third Thursdays at Painters' Hall, 201 Market street. President, J. D. Runkle, 520 N. National avenue; recording secretary, J. E. White, 529 N. National avenue; financial secretary, S. P. Armstrong, 110 N. Judson street.

\*No. 153, Marion, Ind.—Meets every Tuesday night at Riley Hall, northwest corner Third and Washington streets. President, Frank J. Smith, care United Tel. Co.; recording secretary, W. S. S. Crawford, care Marion Lt. and Heating Co.; financial secretary, H. C. La Follette, 1141 W. Fourth street.

\*No. 154, Rock Island, Ill.—Meets first and third Thursdays at Turner Hall, 1520 Third avenue. President, A. Ballard, 1217 15½ street, Moline, Ill.; recording secretary, C. S. Wangelin, 1928 Ninth avenue; financial secretary, A. Coe, 923 Fourth avenue.

\*No. 155, Oklahoma City, O. T.—Meets every Wednesday night at Flood Building, Reno and Broadway. President, John Swirzinski, 107 East Reno; recording secretary, C. F. Blocher, 115 South Harvey; financial secretary, J. C. Clark, 1020 West First street.

\*No. 156, Ft. Worth, Tex.—Meets every Wednesday night at B. T. C. Hall, 210 Main street, third floor, Powell Building. President, Frank Swo, care Kane the electrician; recording secretary, Lee Stephens, 602 West First street; financial secretary, J. W. Wilkinson, 1202 Main street.

\*No. 157, Elkhart, Ind.—Meets first and third Thursday of every month, Central Labor Hall, corner Main and Franklin streets. President, L. D. Whittig, Prairie street; recording secretary, Fred. Livingston, Box 265; financial secretary, Asa Kintler, R. F. D. No. 1.

†No. 158, Temple, Tex.—Meets second and fourth Tuesdays at Odd Fellows' Hall, Avenue A. President, Guy Briant, P. O. Box 335; recording and financial secretary, H. S. Newland, 508 S. Eleventh street.

\*No. 159, Madison, Wis.—Meets second and fourth Thursdays at Union Hall, State street. President, John A. Johnson, 606 East Mifflin street; recording secretary, E. J. Winsor, 1149 East Gorham street; financial secretary, Fred Ingram, 412 West Johnson street.

\*No. 160, Zanesville, O.—Meets first and third Tuesday at 7.30 p. m., at Building Trades Hall, over 208 Main street. President, F. J. Poyner, 5 Bell Flats; recording secretary, John Mangin, Kirk House; financial secretary, A. E. DeLong, Route 8, Zanesville.

\*No. 161, Uniontown, Pa.—Meets first and third Fridays at Trades and Labor Council Hall, Main street. President, J. O. Clark; recording secretary, J. F. Morrow; financial secretary, Wm. C. Lacey, 38 Wilson avenue.

†No. 162, Omaha, Neb.—Meets every Thursday evening, at Labor Temple, Fifteenth and Dodge streets. President, J. P. Hannaher, Labor Temple; recording secretary, B. H. Limenberger, Labor Temple; financial secretary, J. C. Grimm, Labor Temple.

\*No. 163, Wilkesbarre, Pa.—Meets second and fourth Mondays at Building Trades Council Hall, 31 West Market street. President, J. J. McGlynn, 390 E. South street; recording secretary, Thomas Moore, 86 North Sherman street; financial secretary, D. H. Ebert, 400 Scott street.

†No. 164, Jersey City, N. J.—Meets Monday, Fehren's Hall, 168 Beacon avenue. President, J. A. Brennan, 1304 Washington street, Hoboken; recording secretary, Otto Bauer, 187 Griffith street; financial secretary, Edward F. Kenna, 1119 Washington street, Hoboken N. J.

\*No. 165, Newport News, Va.—Meets every other Tuesday evening at C. L. U. Hall, corner Thirty-second street and Washington avenue. President, J. W. Driver, 1015 Twenty-sixth street; recording secretary, E. C. Kelly, R. F. D. No. 1, Hampton, Va.; financial secretary, R. A. Gentis, 1137 Twenty-fourth st.

\*No. 166, Winnipeg, Manitoba, Can.—Meets second and fourth Thursdays at Trades Hall, corner Market and Main. President, H. Lamberton; recording secretary, J. S. Milne, 647 Elgin ave.; financial secretary, W. Girard, 113 Hallett st.

\*No. 167, Pittsfield, Mass.—Meets first and third Wednesdays at Old England Block, North street. President, Hugh J. Breslin, 233 Linden street; recording secretary, R. C. Robertson, 7 Parker street; financial secretary, Fred. A. Wood, 51 Briggs avenue.

\*No. 168, Parkersburg, W. Va.—Meets Wednesdays at Bricklayers' Hall, Court Square. President, G. T. Henderson, Williamstown, W. Va.; recording secretary, J. Roy Mayhew, 178 Avery street; financial secretary, W. C. Vaughan, 1017 Lynn street.

\*No. 169, Fresno, Cal.—Meets every Monday at Union Hall, 1123 K street. President, A. L. Moore, 940 H street; recording secretary, H. F. White, 2029 Fresno street; financial secretary, C. T. McShany, Box 1301.

\*No. 170, Mason City, Iowa.—Meets first and third Thursday evenings at Howe's Hall cor. Fourth and Main streets. President, A. H. Ramsey, 216 South Washington street; recording secretary, F. W. Roberts, 214 East Tenth street; financial secretary, J. D. Templin, 771 East State street.

\*No. 171, Ann Arbor, Mich.—Meets first and third Saturdays at Trades Council Hall, South Main street. President, Geo. F. Haggitt, 18 River st., Ypsilanti; recording secretary, Foster Ostrander, Ypsilanti; financial secretary, F. C. Phelps, 114 Feich street.

\*No. 172, Newark, Ohio.—Meets every Friday night at I. B. E. W. Hall, 11½ E. Church street. President, L. A. Slack, Citizens' Tel. Co.; recording secretary, Sam. C. Alledori, 81 Ninth street; financial secretary, D. S. Hollister, 405 Andover street.

\*No. 173, Ottumwa, Iowa.—Meets second and fourth Wednesdays at Labor Hall, East Second street. President, H. E. McKown, 204 North McLean street; recording secretary, S. W. Speer, Hospital building; financial secretary, E. Trent, 226 North Davis street.

\*No. 174, St. Johns, N. B.—Meets first and third Wednesdays at Berryman's Hall, corner Princess and Charlotte streets. President, D. H. Melvin, 37 High street; recording secretary, John W. Mathison, 11 Metcalfe street; financial secretary, Oltis H. Tracy, 38 Cliff street.

\*No. 175, Benton Harbor, Mich.—Meets every Wednesday, Robinson Block, 110 Pipestone street. President, R. G. Moats, 128 Summit street; recording secretary, R. Emerson, 613 Broad street, St. Joseph, Mich.; financial secretary, C. C. Maddox.

\*No. 176, Joliet, Ill.—Meets every Wednesday at Labor Hall, Jefferson and Ottawa street. President, Ray Allen, 425 Chicago street; recording secretary, A. J. Scheuber, 219 N. Broadway; financial secretary, Denny Wright, 401 Chicago street.

\*No. 177, Paducah, Ky.—Meets Second and fourth Mondays at Central Labor Hall, corner of Seventh and Court streets. President, J. Farmer, 427 Clark street; recording secretary, Ed. Juett, care People's Tel. Co.; financial secretary, H. C. Rawling, 427 Clark street.

\*No. 178, Canton, Ohio.—Meets first and third Wednesday at Brown's Hall, 1409 West Tus street; President, Hugh Williams, 515 E. North street; recording secretary, W. B. Thayer, 808 Lawrence avenue; financial secretary, H. T. Seymour, 1403 West Tus street.

\*No. 179, Charleston S. C.—Meets every second and fourth Friday night at Knights of Pythias Hall, King street opposite Marion Square. President, I. R. Ward, So. Bell Tel. and T. Co.; recording secretary, J. K. Wilson, So. Bell and T. Co.; financial secretary, Samuel Webb, 141 Meeting street.

\*No. 180, Vallejo, Cal.—Meets first and third Friday at Labor Council Hall, Sacramento street. President, L. A. Thatcher, 222 Capitol street; recording secretary, R. M. Plunkett, 502 Virginia street; financial secretary, R. M. Plunkett, 502 Virginia street.



†No. 181, Utica, N. Y.—Meets third Tuesday at Labor Temple, Hotel street, Utica, New York. President, John Greenwood, 82 Roberts street; recording secretary, Herman Wameling, 247 Seymour avenue; financial secretary, Edward T. Fox, 199 Court street.

\*No. 182, La Cananca, Sonora, Mex.—President, A. C. Brown; financial secretary, O. P. Gray.

\*No. 183, Lexington, Ky.—Meets second and fourth Tuesdays at Van Deven Hall, Main street, east of Broadway. President, M. M. Welch, 182 Walnut street; recording secretary, Leslie Kitchen, corner Cross and Pine streets; financial secretary, J. R. Whitmer, P. O. Box 577, Lexington, Ky.

\*No. 184, Galesburg, Ill.—Meets first and third Wednesdays of every month at Trades Assembly Hall, corner Main and Boone avenue. President, J. H. Shull, 286 Duffield avenue; recording secretary, Roy Squires; financial secretary, John Norwood, 149 E. Brooks street.

\*No. 185, Helena, Mont.—Meets first and third Saturdays at Rooms 26, 27, 28 Atlas Block, No. 7 Main street. President, Frank Avery, P. O. Box 1227; recording secretary, Alex. Jones, P. O. Box 1227; financial secretary, C. H. Coar, P. O. Box, 1227.

†No. 186, Hartford, Conn.—Meets every Tuesday at Stationary Engineers' Hall, Times Bldg. President, J. Owens, 85 Hawthorne street; recording secretary, E. O. Sperry, 55 Grand street, New Britain; financial secretary, E. O. Sperry, 66 Kensington street, New Britain, Conn.

\*No. 187, Oshkosh, Wis.—Meets every Tuesday night at Stationary Engineers' Hall, cor. State and Otter streets. President, Emil Prong, 16 Carr street; recording secretary, Robert Waters, 187 Wango street; financial secretary, P. S. Bixby, 140 Pearl street.

†No. 188, Dallas, Tex.—Meets every Wednesday at Labor Hall, Elmand Scotland Court. President, E. A. White, 132 N. Akard; recording secretary, B. E. Loper, 269 Cochran street; financial secretary, Chas. Bush, 311 Wood street.

\*No. 189, Chester, Pa.—Financial secretary, John Lamont, 123 Concord ave.

†No. 190, Newark, N. J.—Meets second and fourth Thursdays at Electrical Workers Hall, 236 Washington street. President, John C. Brennen, 364 New street; recording secretary, Wm. Varley, 250 Clifton avenue; financial secretary, Joseph R. Hoch, 364 New street.

\*No. 191, Everett, Wash.—Meets every Thursday night at Labor Temple, 2820 Lombard street. President, Severn Patterson, 3004 Federal street; recording secretary, W. H. Riggs, 3209 Oak ave.; financial secretary, L. V. Harper, P. O. Box 228.

\*No. 192, Memphis, Tenn.—Meets every Tuesday at Union Labor Temple, 355 Second street. President, Geo. A. Hulbert, 148 Adams street; recording secretary, Frank Underwood, 148 Adams street; financial secretary, W. M. Hay, 207 Ross avenue.

†No. 193, Springfield, Ill.—Meets every Tuesday at I. B. E. W. Hall, 210½ S. Fifth street. President, L. B. Johnson, 528 N. Fifth street; recording secretary, A. Reynick, Clark House; financial secretary, W. E. Oliver, 222 N. Fifth street.

\*No. 194, Shreveport, La.—Meets every Tuesday night at Labor Hall, corner of Texas and Common streets. President, W. A. Holt, 1107 Reynolds street; recording secretary, S. E. Blodgett, Arcade Hotel; financial secretary, R. L. Curtis, 323 Walnut street.

\*No. 195, Marietta, O.—Meets every Thursday at Trades Labor Hall, corner Second and Tynerway streets. President, A. T. Willey, Marietta Tel. Company; recording secretary, Wm. H. Reed, 214½ Fifth street; financial secretary, E. Davis, Box No. 584.

\*No. 196, Rockford, Ill.—Meets first and third Fridays at Electrical Workers Hall, 309½ West State street. President, Clarence Bennett, 414 S. Madison street; recording secretary, Harry J. Miller, 534 Woodlawn ave.; financial secretary, L. C. Williamson, 528 W. State street.

\*No. 197, Bloomington, Ill.—Meets every Friday at Electrical Workers' Hall, over 106 West Front street. President, J. J. Eversole, P. O. Box 274; recording secretary, C. J. Winters, P. O. Box 274; financial secretary, W. S. Briscoe, Box 286.

\*No. 198, Dubuque, Iowa.—Meets second and fourth Wednesdays at Facade Building, Room 1. President, F. Chalder, 57 Grand View ave.; recording secretary, Ed A. Peters, care of St. George Hotel; financial secretary, J. N. Krahli, Lock Box 103.

†No. 199 St. Louis, Mo.—Meets every Tuesday evening, at Electrical Workers' Hall, No. 1028 Franklin avenue. President, T. F. Lappin, 4058 Connecticut street; recording secretary, H. J. Matthews, 3009 Manchester avenue; financial secretary, W. J. Kelley, 2914 Madison street.

\*No. 200, Anaconda, Mont.—Meets first and third Tuesdays, Mattie Block, East Commercial avenue. President, W. Hurst, P. O. Box 433; recording secretary, Jas. O'Mara, P. O. Box 433; financial secretary, J. H. Davis, P. O. Box 433.

†No. 201, Appleton, Wis.—Meets first and third Tuesday of each month at Master Builders' Hall, corner Edward and Appleton streets. President, J. Tempas, 1024 Sixth street; recording secretary, Wm. F. Kerns, 805 N. Division street; financial secretary, U. J. Deuster, 665 Appleton street.

†No. 202, Seattle, Wash.—Meets second Tuesday of every month in Hotel Seattle Building, Occidental avenue and Yesler street. President, J. Horning, East Lake avenue and Gaylor street; recording secretary, Gus Soderberg, Eighth avenue and Pike street; financial secretary, L. H. Brickley, 314½ Ninth avenue, North.

\*No. 203, Champaign, Ill.—Meets every Tuesday night, at Odd Fellows Building, 7 and 9 Neil street. President, H. G. Eastman, 408 North Elm street; recording secretary, John C. McDonald, 1108 West Clark street, Urbana, Ills.; financial secretary, A. L. Chandler, 717 N. Randolph street.

†No. 204, Springfield, Ohio.—Meets every Monday at Trader's and Labor Hall, Main street and Walnut alley. President, F. C. Rotsel, 112 South Center street; recording secretary, H. S. Copeland, 198 Linden avenue; financial secretary, H. F. Shultis, 328 S. Center street.

\*No. 205, Jackson, Mich.—Meets first and third Tuesday at Labor Hall, corner Jackson and West Main streets. President, E. Osborn, 511 North Jackson street; recording secretary, Wm. Lawrence, 316 Greenwood avenue; financial secretary, F. C. Lewis, 410 South Blackstone street.

\*No. 206, Hamilton, Ohio.—Meets every Thursday night at 8 p. m., in K. O. T. M. Hall, corner Third and Court streets. President, Peter Hovis, financial secretary, H. Ed Herrmann, 28 South B street.

\*No. 207, Stockton, Cal.—Meets every Tuesday, at Turner Hall, 110 North Hunter street. President, Frank Ellison, 229 South Sutter street; recording secretary, Wm. E. Lee, 539 South American street; financial secretary, James R. Wagner, 603 West Park street.

\*No. 208, Muscatine, Iowa.—Meets second and fourth Fridays of each month at Trades and Labor Assembly Hall, 105-107 Iowa avenue. President, David P. Patterson, 412 W. Sixth street; recording secretary, J. A. Lawrence, 1617 Mulberry street; financial secretary, W. F. Demorest, 206 East Second street.

\*No. 209, Logansport, Ind.—Meets every Thursday at hall on the corner Broadway and Third streets. President, J. W. Abshire, 1930 Spear street; recording secretary, Nate Costenborder, 820 Race street; financial secretary, Chas. M. Ray, Rural Route No. 1.

†No. 210, Atlantic City, N. J.—Meets every Wednesday night at Odd Fellows Hall, S. New York avenue. President, William Buckingham, C. 7, Champion Ap.; recording secretary, I. N. Cramer, rear 12 South Ohio ave.; financial secretary, C. H. Towne, 1515 Pacific ave.

†No. 211, Atlantic City, N. J.—Meets every Friday night in G. A. R. Hall, S. New York avenue. President, Harry D. Brown, 1806 Ontario ave.; recording and financial secretary, E. W. McCann, Alcazar.

†No. 212, Cincinnati, O.—Meets every Tuesday evening, at Joseph's Hall, southwest corner of Twelfth and Vine streets. President, Joseph A. Cullen, 952 W. Sixth street; recording secretary,

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Harry Falquet, 1125 Jackson street; financial secretary, W. B. Kelley, Norwood, O.

\*No. 213, Vancouver, B. C.—Meets second and fourth Thursdays at O'Brien's Hall, corner Hastings and Homer streets. President, Geo. Cowling, 112 Dufferin street; recording secretary, S. H. Harrison, 523 Hamilton street; financial secretary, A. E. McCartney, 527 Powell street.

\*No. 214, Olean, N. Y.—Meets every Friday at Fountain Hose House, First street. President, S. D. Harding; recording secretary, E. E. Allen, 607 West State street; financial secretary, T. E. Delinger, 128 South Twelfth street.

\*No. 215, Hot Springs, Ark.—Meets every Tuesday night, rear of Plateau Hotel, Chapel street. President, Wm. Bebb, 239 market street; recording secretary, J. Walte, 239 Market street; financial secretary, S. X. Callahan, Box 165.

\*No. 216, Owensboro, Ky.—Meets every Thursday at Lineman Hall, 315½ Frederick street. President, A. D. Faught, 326 St. Elizabeth street; recording secretary, J. H. Carnell, 424 St. Ann street; financial secretary, W. C. Saxton, 326 St. Elizabeth street.

\*No. 217, Seattle Wash.—Meets Mondays at Waitresses Hall, 1420 Second avenue. President, H. A. Patton, 3815 Ashwood avenue; recording secretary, Daniel Buck, 1418 Sixth avenue, financial secretary, E. A. Clarke, 132 Warren avenue.

\*No. 218, Sharon, Pa.—Meets every alternate Monday night at Leslie Hall, Chestnut street. President, F. B. Schoof, South Main street; recording secretary, R. D. Hilliard, 53 Shanengo street; financial secretary, C. D. Brown, Hubbard, Ohio.

\*No. 219, Sullivan, Ind.—Meets first and third Tuesday night at Electric Plant Building. President, S. M. Riggs; recording secretary, J. E. Stanfield, Sullivan, Ind.; financial secretary, N. S. Worley.

\*No. 220, Rochester, N. Y.—Meets first and third Tuesdays at Durand Building, West Main street. President, P. J. Cotter, 98 Ontario street; recording secretary, C. H. Thompson, 204 Clinton avenue N.; financial secretary, E. A. Thompson, 14, 435 Main street east.

\*No. 221, Beaumont, Tex.—Meets every Friday at Rabbs Hall, Pearl street between College and Washington. President, R. Delehanty, Beaumont Trac., L and P Co.; recording secretary, Geo. Mayo, 350 Cypress street; financial secretary, Bruce Reid, 653 Emmett avenue.

\*No. 222, Lafayette, Ind.—Meets every Thursday at Brick Masons' Hall, Tenth and Main streets. President, F. E. Williams, 413 N. Fifth street; recording secretary, E. S. Klinker, 1615 Tippecanoe street; financial secretary, Walter Hawkins, 1621 Casson street.

\*No. 223, Brockton, Mass.—Meets second and fourth Tuesdays, room 114 Arcade Building, 139 Main street. President, Chas. E. Cole, 416 School street, Whitman; recording secretary, Harry R. Allen, 46 Fuller street; financial secretary, Harry R. Allen, 46 Fuller street.

\*No. 224, Ft. Dodge, Iowa.—Meets second and fourth Tuesday of each month at headquarters of Trade and Labor Unions, 721½ Central avenue; President, C. J. Hakes; recording secretary, D. W. Lyman, care F. D. T. G.; financial secretary, D. W. Layman, 620½ Central avenue, Room 6.

\*No. 225, Topeka, Kans.—Meets every Wednesday at Trades' Assembly Hall, 711 Kansas avenue. President, C. H. Baxter, Crawford Flat No. 2; recording secretary, Paul Robinson, Ohio House; financial secretary, D. C. Platt, 502 Chandler street.

\*No. 226, Cedar Rapids, Iowa.—Meets first Thursday at Federation Hall, First and Second streets. President, Bert. Eckenberger, Kenwood Park, Iowa; recording secretary, Frank Thomas, Cedar Rapids, Iowa; financial secretary, V. J. Gibson, Kenwood Park, Iowa.

\*No. 227, Birmingham, Ala.—Meets every Wednesday night at Fox's Hall, corner Fourth avenue and 18th street. President, G. W. Brown, 312 North Eighteenth street; recording secretary, B. C. Jewell, Peoples Tel. Co.; financial secretary, D. Harper, Southern Bell Tel. Co.

\*No. 228, Oil City, Pa.—Meets first and third Tuesdays at K. of P. Hall, Center and Elm streets. President, H. Bocel, 19 Grove avenue; recording

secretary, W. A. Humes; financial secretary, J. W. Bullock, 313 Pine street.

\*No. 229, Manchester, N. H.—Meets first Tuesday of each month at Building Trades Hall, 843 Elm street. President, W. P. Michie, Old City Hotel; recording secretary, Chas. W. Warner, 75 Sagamore street; financial secretary, Rudolph Sheer, 23 Roynton street.

\*No. 230, Victoria, B. C.—Meets every third Friday at Labor Hall, corner Johnson and Douglas streets. President, E. Routh, 62 Government street; recording secretary, F. F. McKittrick, 145 Chatham street; financial secretary, E. C. Knight, 200 Douglas street.

\*No. 231, Grand Rapids, Mich.—Meets second and fourth Friday evenings of each month at Lincoln Club Rooms, 66 Pearl street. President, A. Montabone; recording secretary, V. L. Faussey, 570 S. East street; financial secretary, H. R. Erdmann, 449 Terrace avenue.

\*No. 232, Schenectady, N. Y.—Second and Fourth Tuesdays, at Bradt-Yates Building, corner Center and State streets. President, A. Nuttall, 4 Harvard street; recording secretary, C. H. Tinke, 761 E. Liberty street; financial secretary, E. Burnham, 119 Guilderland avenue.

\*No. 233, Colorado Springs, Colo.—Meets every Thursday at Building Labors Hall, over 12 East Huerfano street. President, D. C. Walsh, 510 S. Cascade ave.; recording secretary, Robt. J. Clark, 114 N. Weber street; financial secretary, F. M. Jahn, 318 N. Wahsatch ave.

\*No. 234, Schenectady, N. Y.—Meets first and third Saturdays at Arcade Hall, opp. depot. President, Wm. Armor, 4 Catherine street; recording secretary, S. Fulklestein, 17 and 19 S. Center street; financial secretary, C. A. Sherman, 338 Carrie street.

\*No. 235, Cincinnati, Ohio.—Meets Thursday at Joseph's Hall, Twelfth and Vine streets. President, Levi M. Ringle, Joseph's Hall, southwest cor. Twelfth and Vine streets; recording secretary, H. D. Kibby, 132 Saunders street, Mt. Aubin, Cincinnati, Ohio; financial secretary, Joe Early, 2019 Breen street.

\*No. 236, Streator, Ill.—Meets first and third Monday nights at Casey's Hall, 107 East Main street. President, H. M. Griffith, N. Bloomington; recording secretary, Geo. Duffner, 514 W. Bridge street; financial secretary, J. A. Shuler, 309 East Bridge street.

\*No. 237, Lorain, Ohio.—Meets every Thursday in each month at Wagner Hall, south corner Erie and Broadway. President, E. E. Falconer, 231 Gregg avenue; recording secretary, J. F. Smith, 323 Franklin street; financial secretary, A. C. Marsh, 240 8th street, Elyria, Ohio.

\*No. 238, Asheville, N. C.—Meets every Saturday at C. L. U. Hall, 39 Patton avenue. President, E. H. Clenenger, Western Union Telegraph Office; recording secretary, J. N. Welch, Western Union Co.; financial secretary, J. H. Graham, 140 Bailey street.

\*No. 239, Newark, N. J.—Electric fixture fitters, wiremen, and hangers—Meets first and third Thursday at Electrical Workers Hall, 236 Washington street. President, Wm. G. Scheussler, 241 Camden street; recording secretary, Harry Schnarr, 185 North Fourth street; financial secretary, Michael Tanenbaum, 104 Hunterdon st.

\*No. 240, Philadelphia, Pa.—Telephone.—Meets every Thursday at Morning Star Hall, corner of Ninth and Callowhill streets. President, Joseph Stern, 2840 W. Albert street; recording secretary, John Boone, 2330 Coral street; financial secretary, G. D. Loudenslager, 1209 Jefferson street.

\*No. 241, Dayton, Ohio.—Meets every Monday night at United Trades Council Hall, 27 South Jefferson street. President, Thomas E. Fisher, 54 Logan street; recording secretary, Harry Toot, 10 Hawken street; financial secretary, C. Reiter, 911 West Third street.

\*No. 242, Decatur, Ill.—Meets every Friday night at Room 416, Powers' Building, cor. South Water and East Main streets. President, E. O. Baker, Room 16 Syndicate Block; recording secretary, Jno. Simon, 416 Powers Building; financial secretary, A. Frazier, 416 Powers Building.

\*No. 243, Vincennes, Ind.—Meets every Wednesday night at Odd Fellows Building, corner

Second and Broadway street. President, Joe Eheart; recording secretary, Lester Johnson, 210 Vallmer street; financial secretary, C. F. Green, 621 North Seventh street.

†No. 244, East Mauch Chunk, Pa.—Meets first and third Sunday, 2 p. m., at Hess' Hall, Center street, between Fourth and Fifth. President, Wren Brown, East Mauch Chunk, Box 298; recording secretary, Anthony Armbruster, East Mauch Chunk, Box 232; financial secretary, J. P. Tracy, East Mauch Chunk, Box 195.

†No. 245, Toledo, O.—Meets every Friday night at Mulcaheys Hall, 714 Monroe street. President, J. Callahan, 912 Vinton street; recording secretary, Jas. Shea, 226 Platte street; financial secretary, Jacob Snyder, 536 South Erie street.

\*No. 246, Steubenville, O.—Meets first and third Wednesday at Druids' Hall, North Fourth street. President, S. M. Richards, 100 South street; recording secretary, J. R. McCoy, 774 Lincoln avenue; financial secretary, E. D. Richards, corner High and South streets.

No. 247, Schenectady, N. Y.—Meets first and third Fridays of each month at Trades Assembly Hall, State street, near Canal bridge. President, Arthur E. Sparks, 20 Cora street; recording secretary, Herbert U. Merrill 110 State street; financial secretary, R. C. Schermerhorn, 340 Palge street.

\*No. 248, Chillicothe, Ohio.—Meets second and fourth Fridays at Federal Labor Union Hall, 153 East Fifth street. President, E. O. Jackson, 157 West Wolter street; recording secretary, Strawder J. Swyers, 39 E. Second street; financial secretary, Strawder J. Swyers, 39 E. Second street.

\*No. 249, St Catharines, Ontario.—Meets second and fourth Tuesday, each month, at Trades and Labor Hall, St. Paul street. President, J. W. Johnson, St. Catharines, Ontario; recording secretary, J. Charles Clifford, St. Catharines, Ontario; financial secretary, Joseph Lappin, St. Catharines, Ont.

\*No. 250 San Jose, Cal.—Meets every Tuesday in Phelan Hall, corner First and Post streets. President, J. R. Kamp, 14 East San Fernando streets; recording secretary, Nick Cooper, 397 West San Carlos street; financial secretary, J. W. Hilton, No. 57 South Seventh street.

\*No. 251, Pine Bluff, Ark.—Meets first and third Wednesdays at Carpenters Hall, 112½ W. Banaque streets. President, B. R. Brown, P. O. Box 248; recording secretary, Vernon Mullen, P. O. Box 248; financial secretary, J. W. Johnson, P. O. Box 248.

\*No. 252, Schenectady, N. Y.—Meets third Thursday each month at Ellis' Building, State street, next canal bridge. President, Charles Heffernan, 806 Jay street, continued; recording secretary, Samuel McKinney, 937 Albany street; financial secretary, C. A. Bates, Box 655.

\*No. 253, Cedar Rapids, Iowa.—Meets second and fourth Sunday mornings at 10.30 at Union Hall, corner of First avenue and Second street. President, Tony Weidlich, 1036 South Sixth street, west; recording secretary, S. L. Stafford, 500 Seventh avenue, west; financial secretary, C. A. Isentraut, Iowa Tel. Co.

No. 254, Schenectady, N. Y.—Switch-board Makers.—Meets second and fourth Tuesdays at Machinists Hall, State and Jay streets. President, A. M. Franchois, 258 Broadway; recording secretary, D. Murphy, Hallet street; financial secretary, Jno. H. Cornick, 808 Grant avenue.

\*No. 255, Ashland, Wis.—Meets first and third Tuesday of each month at Longshoremen's Hall, corner Ellis avenue and Front street. President, Chess Vrieland, Tremont Hotel; recording secretary, E. Jacott, care Wisc. Bell Tel. Co.; financial secretary, O. Scott Tomkins, 220 Seventh avenue, west.

\*No. 256, Charleston, W. Va.—Financial secretary, E. F. Weaver, 403 Kanawha st., Charleston.

\*No. 257, Jackson, Miss.—Meets every Thursday in Bricklayers' Hall, W. Jackson street. President, J. N. Olson; recording secretary, J. M. Grafton; financial secretary, E. J. Morris, Street R. R. Co.

†No. 258, Providence, R. I.—Meets every Friday night at Hanley Building, 63 Washington street. President, John V. Bowers, 53 Capron street, Providence, R. I.; recording secretary, Martin B. Hunt, 33 West Friendship street, Providence,

R. I.; financial secretary, John W. Fisher, 169 Bartlett avenue, Edgewood, R. I.

\*No. 259, Salem, Mass.—Meets every Tuesday evening at I. O. O. F. Hall, Washington street. President, W. B. Jackson, 6 Bay street, Beverly; recording secretary, C. R. Hale, 403 Summer street, Lynn; financial secretary, F. A. Coker, 41 March street, Salem.

?No. 260, Fort Wayne, Ind.—Meets second and fourth Wednesday nights in each month in Hibernian Armory, 1022 Calhoun street. President, John T. Somers, 632 Hendricks street; recording secretary, Edward P. Schrantz, 325 Melita street; financial secretary, Leroy Zellers, 1420 Swenney ave.

†No. 261 Saratoga Springs, N. Y.—First and third Wednesday, Phythian Hall, 464½ Broadway. President, Ross Patterson, Imperial Hotel; recording secretary, W. H. Lavigne, 131 Clinton street; financial secretary, W. H. Owen, 42½ Caroline street.

\*No. 262, Pullman, Ill.—Meets second and fourth Mondays at K. of P. Hall, Arcade Building, 111 Place. President, S. H. Dawney, 6525 Ellis avenue, Chicago; recording secretary, J. A. Larsen, 8028 Coles avenue, South Chicago; financial secretary, M. J. Coleman, 5630 Wabash avenue, Chicago.

\*No. 263, Shamokin, Pa.—Meets Thursday evening at 7.30, Room 7, Seiler Zimmerman Building, Independence street. President, Harry T. Morgan, corner Pine and Diamond streets; recording secretary, Rosser Samuels, 118 Poplar street; financial secretary, Ed. Roth, 248 South Wood street.

†No. 264, Pittsfield, Mass.—Meets second and fourth Friday of every month at Bartenders Hall, England Block. President, E. C. Ventis, Lennox, Mass. recording secretary, J. K. Beardsley, 44 Hamlin street, Pittsfield, Mass.; financial secretary, C. C. Rowley, 240 Tyler street.

\*No. 265, Lincoln, Neb.—Meets every Monday at A. O. U. W. Hall, 132 South Tenth street. President, Mark T. Caster, 2131 S street; recording secretary, John Sherman, 425 South Fourteenth street; financial secretary, George W. Neally, 428 South Thirteenth street.

\*No. 266, Sedalia, Mo.—Meets every Thursday at Glass Hall, corner Third and Lamine streets. President, Milo J. Spahr, 312 W. Eleventh street; recording secretary, O. L. Gosnell, care of Missouri and Kansas Telephone Company; financial secretary, L. Elsemann, 705 East Fifteenth streets.

†No. 267, Schenectady, N. Y.—Meets first and third Saturday of each month at K. of C. Hall, over Gazette office. President, B. A. Cawley, 77 Second avenue; recording secretary, J. W. Andry, 534 Mumford street; financial secretary, J. G. Baringer, P. O. Box 184, Scotia, N. Y.

\*No. 268, Newport, R. I.—First and third Fridays, at Central Labor Hall, Thames street. President, C. W. Holm, 14 Bliss Road; recording secretary, W. H. Mitchell, Daily Cottage, Dixon street; financial secretary, F. A. Bloom, 1 Harrison avenue.

\*No. 269, Princeton, Ind.—Meets first and fourth Monday night, on second floor of City Building, Broadway and Prince streets. President, Charles Stevens, Telephone office; recording secretary, Lewis S. Kell, 211 South Seminary street; financial secretary, L. S. Kell, 109 North Prince street.

?No. 270, New York, N. Y.—Meets first and third Fridays and second and fourth Thursdays of each month, at 127 Park Row, New York City. President, G. Fairchild, Benson avenue and Bay. Twenty-second street, Bensonhurst, Brooklyn; recording secretary, G. W. Townsend, 961 Hancock street, Brooklyn; financial secretary, I. C. Grant, 33 Broadhurst avenue, New York.

\*No. 271, Altoona, Pa.—First and third Monday, each month, Carpenter's Hall, Thirteenth street and Eleventh avenue. President, Chas. Downs; financial secretary, L. M. McPherson, 902 Chest. avenue; recording secretary, F. T. Kleffman, 910 Lexington avenue.

\*No. 272, Sherman, Texas.—Meets first and third Tuesdays, at Odd Fellows' Hall Walnut and Houghton streets. President, Frank H. Wright, care of Grayson Tel. Co.; recording secretary, W.

L. Porter, care of S. W. Tel. Co.; financial secretary, E. F. Jerger, 537 W. Locust street.

\*No. 273, Clinton, Iowa.—Meets second and fourth Wednesdays, at Labor Temple, Fifth avenue. President, J. J. Davie, 202 South Second street; recording secretary, O. A. Prest, 425 Dewitt street; financial secretary, C. C. Mathiesen, 629 Stockholm street.

\*No. 274, Marinette, Wis.—Meets second and fourth Thursday at Trades Council Hall, Main street. President, Edwin A. Golden, Wells street; recording secretary, A. LaChance, 912 Elizabeth avenue; financial secretary, F. E. McWayne, 1838 Stephenson street.

\*No. 275, Muskegon, Mich.—Meets first and third Thursday at Trades and Labor Hall, Western avenue. President, Edward Plunkett, 25 Sumner street; recording secretary, W. S. Krebs, 54 Western avenue; financial secretary, C. B. Morey, 32 Miller avenue.

\*No. 276, West Superior, Wis.—Meets first and third Tuesdays, at Union Hall, Hammond Block. President, W. W. Kielly, 916 Baxter avenue; recording secretary, J. R. Tillotson, 1620 Oaks avenue; financial secretary, P. C. Miller, 1901 Butler avenue.

\*No. 277, Kingston, N. Y.—Meets first and third Thursday evenings at Recorder's Room, City Hall, Reilly street and Broadway. President, H. H. Buckbee, Lucas avenue; recording secretary, Roswell Coles, 76 Maiden Lane; financial secretary, H. Rumsey, 100 Downs street.

\*No. 278, Rock Island, Ill.—Meets first and third Friday of each month at Turner Hall, Third avenue, between Fifteenth and Sixteenth streets. Rock Island, Ill. President, George Briggs, 2005 Rock Island street, Davenport, Iowa; recording secretary, Lewis L. Corey, 2014 Iowa St., Davenport, Iowa; financial secretary, Jay C. Mead, 655 East Sixth street, Davenport, Iowa.

\*No. 279, Chicago, Ill.—(Machine repairers, dynamo and switchboard tenders).—Meets first and third Tuesdays at 83 E. Madison st., Hall 7. President, S. Bennett 1587 West Twelfth street; recording secretary, S. A. Hoemann, 44 Win drop Place; financial secretary, Jas. A. Pepper, 178 Dearborn avenue.

\*No. 280, Hammond, Ind.—Meets first and third Friday at K. of P. Hall, 247 State street. President, B. C. Mead, 247 State street; recording secretary, S. J. Carpenter, 136 Clinton street; financial secretary, C. R. Sherard.

\*No. 281, New Orleans, La.—Meets first Friday in each month at McMahon's Hall, Dryades street, near Calloope. President, Chas. Kister, 2719 First street; recording secretary, P. Radlet, 1510 N. Robinson street; financial secretary, Geo. Lorrick, 6115 Laurel street.

\*No. 282, Chicago, Ill.—Meets second and fourth Thursday at corner of 44th and Halstead streets. President, P. Sullivan, 3733 Wallace street; recording secretary, C. Coult, 3342 Archer ave.

\*No. 283 San Francisco, Cal.—Meets every Tuesday, at Alcazar Building, 120 O'Farrell street. President, H. Wolfe 333 Minna street; recording secretary, C. H. Hanson, 108½ Fell street; financial secretary, William Coyle, 1726 Twelfth ave., south.

\*No. 284 Rochester, N. Y.—(Station men).—Meets second and fourth Thursdays of each month, Snelder's Hall, 14 North Water street. President, George M. Lampman, 72 Glasgow street; recording secretary, W. J. K. Sutherland, 47 Elm street; financial secretary, James B. Coyle, 65 Davis street.

\*No. 285, Lynn, Mass.—Financial secretary, H. Patten, 29 Hanover street.

\*No. 286, New Albany, Ind.—Meets every Monday night at Cigar Makers' Hall, State and Market street. President, J. B. Firster, 1823 Rear Market; recording secretary, C. L. Biel, 1103 Oak street; financial secretary, J. P. Elliott, 526 Culb avenue.

\*No. 287, Philadelphia, Pa.—Meets every Wednesday evening in hall located at No. 287 N. 9th street. President, C. H. Wier, 2311 South Mole street; recording secretary, T. W. Carroll, West Palmyra, N. J.; financial secretary, George F. Shaffer, 818 North Thirteenth street.

\*No. 288, Waterloo, Iowa.—Meets first and third Thursday at Central Labor Hall, 215½ E. Fourth

street. President, W. J. Braydon, 1202 Bluff street; recording secretary, H. J. Miller, 409 W. Fourth; financial secretary, Brickley, Chas. P. O. Box 764

\*No. 289, Santa Cruz, Cal.—President, Don A. Loucks, Alta House; financial secretary, Frank T. Blake, 354 Pacific avenue.

\*No. 290, Danville, Ill.—Meets first and third Mondays at business agents office, 25 West Main street. President, Pearl Baum, 307 Oak street; recording secretary, Bert Smith, 214 E. Madison street; financial secretary, W. E. Crosley, 12 E. North street.

\*No. 291, Boise City, Idaho.—Meets every Friday evening at Labor Hall, Banack street, between Eighth and Ninth streets. President, W. W. Moore, Thirteenth and Eastman streets; recording secretary, James D. McCune, Pacific Hotel; financial secretary, T. H. Martin, P. O. Box 525.

\*No. 292, Minneapolis, Minn.—Meets second and fourth Tuesdays at Union Temple, No. 3. President, P. W. Hall; recording secretary, T. F. Brady; financial secretary, H. M. Crawshaw, 2027 Willow avenue.

\*No. 293, North Adams, Mass.—Meets every second Sunday at 11 a. m., at Sullivan Block, sMain street. President, Fred. W. Pinkham, Holden street; recording secretary, Arthur A. Isbell, 80 Porter street; financial secretary, Edward S. Boylan, 18 School street.

\*No. 294, Tuncle, Ind.—Meets every Tuesday night at Union Labor Hall, Room 2, corner Walnut and Main streets. President, Clyde Zeek; recording secretary, Orvil Overcash; financial secretary, Ralph Garst, 405 Wheeling avenue.

\*No. 295, Natchez, Miss.—President, L. T. Moore; financial secretary, C. R. Foreman, 209 South Broadway.

\*No. 296, Poughkeepsie, N. Y.—Meets first and third Monday evening each month, at 405 Main street. President, Jno. McAbee, 9 Cannon street; recording secretary, Fred Wiggan, 35 Market street; financial secretary, Jacob Ostrom, 35 Market street.

\*No. 297, Piqua, Ohio.—Meets second and fourth Thursdays at Plock's Hall, 114 South Main street. President, J. G. Ballard, Tippecanoe City, Ohio; recording secretary, C. M. Reed, 617 River street, Piqua, Ohio; financial secretary, J. H. Parlette, No. 8 West street, Troy, Ohio.

\*No. 298, Findlay, Ohio.—Financial secretary, Clair Diffenderfer, 105½ So. Main street.

\*No. 299, Camden, N. J.—Meets every Thursday at Daley's Hall, Northwest corner Seventh and Burch streets. President, William Fullerton, Pavonia, N. J.; recording secretary, Peter T. Ward, 619 Cedar street; financial secretary, H. B. Fraser, 800 Kimber street.

\*No. 300, Auburn, N. Y.—Meets every Thursday, at C. M. B. A. Hall, Franklin street. President, A. Long, 123½ Fulton street; recording secretary, Harry Richer, Hoffman street; financial secretary, Frank B. Cahill, Brunswick Hotel.

\*No. 301, Texarkana, Ark.—Meets every Wednesday at Union Labor Hall, 216 Pine street. President, W. F. Robinson, 214 Walnut street; recording secretary, George E. Russell, 226 State Line; financial secretary, J. F. French, 226 State Line.

\*No. 302, Peoria, Ill.—Meets First and third Tuesdays at 218 Main street. President, E. C. Gregg, 913 First avenue; recording secretary, H. C. Lupton, 504 St. James street; financial secretary, L. C. Crawley, 115 Dechman avenue.

\*No. 303, Lincoln, Ill.—Meets first and third Wednesday of each month at Painters' Hall, East Pulaski street. President, F. E. Taylor, 330 Third street; recording secretary, E. S. Kausdell, 317 South Kickapoo street; financial secretary, C. E. Chowning, 302 Delavan street.

\*No. 304, New Haven, Conn.—Meets first and third Tuesday at Union Hall, 99 Orange street. President, W. R. Johnson, 773 Whitney avenue; recording secretary, W. M. Dutton, 542 Chapel street; financial secretary, T. H. Schmolik, 88 Franklin street.

\*No. 305, Fort Wayne, Ind.—Financial secretary, A. H. Meyer, 69 Elizabeth st.

- \*No. 306, Albuquerque, New Mex.—Meets first and third Thursdays, Third and Gold avenue, Carpenter's Hall. President, M. Nash, 216 South Second street; recording secretary, M. N. Sweet, 216 South Second street; financial secretary, E. R. Hotelling, 110 Gold avenue.
- \*No. 307, Cumberland, Md.—Meets first and third Saturday, K. of P. Hall, 89 Baltimore street. President, J. H. Reid, 29 Frederick street; recording secretary, Michael Gill, Tremont Hotel; financial secretary, R. Snyder, 17 Harrison street.
- \*No. 308, Beaumont, Tex.—Meets every Tuesday night, 284 Pearl street, opposite post office; President, E. T. Simmonds, 915 Forsythe street; recording secretary, L. Cook, 812 Magnolia avenue; financial secretary, W. G. Miller, 284 Pearl street.
- \*No. 309, East St. Louis, Ill.—Meets every Tuesday evening at Bartenders' Hall, Fourth street, near Broadway. President, Charles Bennett, State and Sixteenth streets; recording secretary, C. Arnold, 22 North Main street, E. St. Louis, Ill.; financial secretary, R. Hartske, 2752 Lafayette ave.
- \*No. 310, Stamford, Conn.—Meets first Friday of each month, Wm. T. Minor, Post G. A. R. Hall, 48 Park Row. President, Goodrich E. Risley, 221 Atlantic street; recording secretary, John J. Farrell, Glenbrook, Conn.; financial secretary, Norman R. Wilcox, 109 Stillwater avenue.
- \*No. 311, Beloit, Wis.—Meets first and third Wednesday at Trades Council Hall, Bridge and Third streets. President, Chas. Ford, 774 Brooks street; financial secretary, A. J. Gilbertson, 1039 Prairie avenue.
- \*No. 312, Pocatello, Idaho.—Meets first and third Mondays at Eagle Hall, corner of First avenue and Center street. President, L. J. Reynolds; recording secretary, W. E. Mittenberger, P. O. Box 512.
- \*No. 313, Wilmington, Del.—Meets first and third Friday at N. E. corner of 8th and Orange. President, Wm. MacKenzie, 809 South Harrison street; recording secretary, George Senior, 813 Tatnall street; financial secretary, Geo. T. Lyon, 422 E. Fifth street.
- \*No. 314, Tyler, Texas.—Meets second and fourth Wednesdays at Trades Council Hall, South side Square. President, F. E. L. Ivey, care of Bell Telephone Co.; recording secretary, W. B. Roberts, 501 West Houston street; financial secretary, W. B. Roberts, 501 West Houston street.
- \*No. 315, Chicago, Ill.—Meets first and third Monday in every month. President, E. Schweiker, 1875 N. Ashland avenue; recording secretary, C. B. Hopkins, 819 North Artesian avenue; financial secretary, J. Liebrich, 3632 LaSalle street.
- \*No. 316, Ogden, Utah.—Meets every Saturday, Union Labor Hall, Twenty-fourth, between Washington and Grant street. President, W. R. Jackson, P. O. Box 44; recording secretary, E. F. Bellvir, Box 44; financial secretary, Geo. M. Stoddard, Box 44.
- \*No. 317, Hopkinsville, Ky.—President, Pat Cenby; financial secretary, George McDonald.
- \*No. 318, Knoxville, Tenn.—Meets first and third Tuesdays of each month, Independent Hall, 718 Gay street. President, J. G. Harrison, Spring street; recording secretary, John McCarroll, Market Square; financial secretary, J. O. Shelley, 1204 W. Fifth avenue.
- \*No. 319, Pittsburg, Pa.—Meets second and fourth Monday of each month at K. of L. Hall, 535 Smithfield street. President, George E. Plenan, 5 Gray street, Mt. Wash. Pittsburg, Pa.; recording secretary, Wm. G. Connie, 2511 Hallet street; financial secretary, Wm. A. Kelly, 305 Wood street.
- \*No. 320, Paris, Tex.—Meets every Thursday night at Roundtree Building, North Main street. President, J. G. Sullivan; recording secretary, W. N. Banta, 735 North Main street; financial secretary, J. R. Hancock, Vineyard Hotel.
- \*No. 321, La Salle, Ill.—Meets first and third Saturdays at Reed & O'Neill's Hall, 845 First street. President, Thomas Heffron, La Salle, Ill.; recording secretary, Noxie Dusch, 227 Bucklin street; financial secretary, Jos. B. Skovare, 328 Second street.
- \*No. 322, Kokomo, Ind.—Meets every Wednesday night at I. I. C. Co. Hall, corner Union and High streets. President, E. C. Vaughn, 272 S. Buckeye street; recording secretary, Geo. H. Martzolf, 81 W. Mulberry street; financial secretary, Glen Hockett, 150 East Walnut street.
- \*No. 323, Fairmont, W. Va.—Meets Saturday nights at Musgrave Hall, Monroe street. President, H. S. Upton, general delivery; recording secretary, T. N. Bennet, Fairmont general delivery; financial secretary, George E. Allard, Box 607, Fairmont, W. Va.
- \*No. 324, Brazil, Ind.—Meets alternate Tuesday nights at United Mine Workers' Hall, Main and Walnut streets (Opera Block). President, Harry Reed, 12 W. Maple street; recording secretary, Birt Stauts, 203 South Lambert street; financial secretary, L. M. Moore, 403 South Lambert street.
- \*No. 325, Binghamton, N. Y.—Meets every Friday, 8 p. m. at C. L. U. Hall, 79 State street. President, F. K. Spencer, 18 New street; recording secretary, R. P. Noble, 18 New street; financial secretary, W. J. Bidwell, 120 Washington St.
- \*No. 326, Connellsville, Pa.—Meets second and fourth Mondays at Plumbers' Hall, No. 108 North Pittsburg street. President, Alex. Angus, Connellsville; recording secretary, Frank Buttermore, New Haven, Pa.; financial secretary, G. S. McClay, 118 N. Pittsburg street.
- \*No. 327, West Palm Beach, Fla.—Meets first and third Mondays at Central Labor Hall, Clematis avenue. President, E. W. J. Farrish; recording secretary, J. E. Chambers; financial secretary, Stephen L. Harman, P. O. Box 451.
- \*No. 328, Oswego, N. Y.—Meets every second Wednesday evening, Trades and Labor Hall, West 1st between Bridge and Oneida street. President, John Goodwin, 318 Walnut street; recording secretary, J. J. Glynn, 69 East Cayuga street; financial secretary, Frank Gallagher, 79 East Eighth street.
- \*No. 329, Shelbyville, Ind.—Meets every Friday night at Union Hall, Public Square. President, W. J. Smith, 143 East Walker street; recording and financial secretary, A. C. Lee, 26 Second street.
- \*No. 330, Kansas City, Mo.—Meets every other Wednesday at Electrical Workers Hall, 1333 Grand ave. President, Henry Hollingbarger, 1710 Grand ave; recording secretary, Earl C. Zoll, 318 East Seventeenth street; financial secretary, G. V. Tudhope, Missouri and Kansas Tel.
- \*No. 331, Long Branch, N. J.—Meets first and third Monday each month at Phil Daly's Hose Company's Hall, Second avenue. President, E. J. Dougherty, 174 Union ave.; recording secretary, John A. Brokaw, 31 Washington street; financial secretary, Jno. Coles, Jr., Box 127, Station B, Long Branch, N. J.
- \*No. 332, Sault Ste Marie, Mich.—Meets Tuesday night, at La Lond Block, Ashmun streets. President, Dave Howey, 235 Ridge street; recording secretary, R. McClamchey, 503 Spruce street; financial secretary, C. Van Dusen, 809 Young street.
- \*No. 333, Emporia, Kans.—Meets every Tuesday night at 323½ Commercial street. President, E. McKinsey, 101 So. West street; recording secretary, W. M. Johnson, 709 Merchant street; financial secretary, W. C. Prince, 210 So. Merchant street.
- \*No. 334, Whatcom, Wash.—Financial secretary, H. H. Hawkins, 2107 Park street.
- \*No. 335, Springfield, Mo.—Meets Wednesday, Odd Fellows Hall, 302 Boonville street. President, G. H. Robinson, 604 South street; recording secretary, R. T. Brennan, 433 S. Main street; financial secretary, C. A. Hoag, 953 S. Jefferson street.
- \*No. 336, Oskaloosa, Iowa.—Meets first and second Tuesdays, at Engineer's Hall, West High avenue. President, Jos. Paling, Oskaloosa; recording secretary, John Teos, Oskaloosa; financial secretary, G. W. Gordon, 207 E. Third avenue.
- \*No. 337, Chicago, Ill.—Meets second and fourth Mondays at Dewey Hall, 70 Adams street. President, W. J. Foley, 240 North Kedzie avenue; recording secretary, H. C. Sharp, 5820 Princeton avenue; financial secretary, A. R. Clark, 6505 Woodlawn, avenue.

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\*No. 338, Denison, Tex.—Meets every first and third Thursdays at Labor Hall, 202½ W. Main street. President, Jack Cleveland, care of G. Co. Tel. Co.; recording and financial secretary, J. W. Acree, 101 East Day street.

\*No. 339, Sterling, Ill.—Meets first and third Wednesday at Labor Hall, 308 Locust street. President, Geo. Thomas, Sterling, Ill.; recording secretary, John Powers, 105 Twelfth avenue; financial secretary, R. L. Fairbrother, 1011 First avenue, Sterling, Ill.

†No. 340, Sacramento, Cal.—Meets first and third Mondays at Pythian Castle, corner Ninth and I streets. President, C. W. Beaton, 1620 I street; recording secretary, Geo. H. Curtis, 1318½ Sixteenth street; financial secretary, F. H. Bennett, 614 Sixteenth street.

\*No. 341, Ottawa, Ill.—Meets second and fourth Wednesdays of each month, at Gebhardt's Hall, 630 West Madison street. President, Wm. L. Spore, 119 W. Washington street; recording secretary, J. H. Brown, 1225 Phelps street; financial secretary, T. A. Stone, Cen. Union Tel. Co.

\*No. 342, New Brighton, Pa.—Meets first and third Thursdays, E. J. Ryan's Hall, corner Third avenue and Ninth street. President, Geo. J. Wolf, 1709 Fourth avenue, Beaver Falls, Pa.; recording secretary, Chas. Cook, 621 Eighth street, Beaver Falls, Pa.; financial secretary, J. L. Allwine, 654 Case street, Rochester, Pa.

\*No. 343, Norwich, Conn.—Meets second and fourth Wednesday at Carpenters' Hall, Shetucket street. President, R. M. Kittson, Woodmansee avenue; recording secretary, Walter Holden, 150 Main street; financial secretary, W. H. Hall, 87 Cliff street.

\*No. 344, New London, Conn.—Meets first and third Friday at Bacon Block, State street. President, W. H. Vibber, 24 Mountain avenue; recording secretary, C. C. Comstock, 5 Franklin street; financial secretary, John S. Loveless, 11 Berkley avenue.

\*No. 345, Mobile, Ala.—Meets second and fourth Mondays at I. O. O. F. Hall, corner of St. Joseph and St. Michael streets. President, J. W. Scouyers, 804 Elmira street; recording secretary, C. L. Singler, care of Electric Light Co., Royal and St. Louis streets; financial secretary, W. E. Prewitt, 310 Charleston street.

\*No. 346, Fort Smith, Ark.—Meets first and third Tuesday at K. of P. Hall, over 708 Gar. avenue. President, Nat. Graham, 21 N. Twelfth street; recording secretary E. M. Wright, 819 N. Fifth street; financial secretary, W. H. McDonald, 710 S. Eleventh and H streets.

\*No. 347, Peru, Ind.—Meets first and third Friday at Teamster's Hall, Petty Block. President, Frank Seamon, 72 E. Fifth street; recording secretary, Elmer Burlingame, 217 E. Fifth street; financial secretary, Wm. Odum, 92 E. Eighth street.

\*No. 348, Greenville, Tex.—Meets second and fourth Thursday at Labor Hall, 278 West Lee street. President, C. A. Duck, 216 N. Stonewall street; recording secretary, W. Brame; financial secretary, C. M. Christopher.

\*No. 350, Hannibal, Mo.—Meets second and fourth Monday at Bartenders Hall, corner of Main and Broadway. President, Lawson Steadman, 806 North Third street; recording secretary, Geo. M. Jackson, 220 Rock street; financial secretary, Harry Janes, 211 Center street.

\*No. 351, Meriden, Conn.—Meets first and third Wednesday each month, at Turners' Hall, Pratt street. President, John J. Buckley, 29 Pratt street, Meriden, Conn.; recording secretary, Charles Bellows, 16 Bristol street, Wallingford, Conn.; financial secretary, A. E. Cooke, Crown street, Meriden, Conn.

\*No. 352, Lansing, Mich.—Meets second and fourth Tuesday at Labor Hall, Washington avenue, north. President, Bert Evans, 734 Shaw street, west; financial secretary, J. D. Mosher, 535 Larch, north; recording secretary, C. Edington, 111 Short street.

†No. 353, Toronto, Can.—Meets first and third Mondays, at Occident Hall, cor. Queen and Bathurst streets. President, D. Mathieson, 32 Mansfield avenue; recording secretary, J. Fyfe, 32 Mansfield avenue; financial secretary, Jno. Ferguson, 275 Lansdowne avenue.

†No. 354, Salt Lake City, Utah.—Meets every Wednesday at 7.30 p. m., I. B. E. W. Hall, First, South and Main streets. President, W. H. Mel-drum, P. O. Box 213; recording secretary, A. N. Thomas, P. O. Box 213; financial secretary, Robert Burns, P. O. Box 213.

\*No. 355, Pittsburg, Pa.—Meets second and fourth Thursday at First National Bank Building, Wilkinsburg, Pa. President, W. J. Wigington, 211 Ninth avenue, Homestead; recording secretary, W. G. McGettigan, East Pittsburg; financial secretary, Geo. M. Smith, P. O. Box, 217, East Pittsburg.

†No. 356, Kansas City, Mo.—Meets every Monday, in Electrical Workers' Hall, 1333 Grand avenue. President, Sam H. Hawkins, 1333 Grand avenue; recording secretary, F. J. Schadel, 1333 Grand avenue; financial secretary, J. B. Schriber, 203 West Fifteenth street.

\*No. 357, Pittston, Pa.—Meets first Thursday after the 15th at Advocate Office, Butler Block. President, John Sheridan, 17 High street, Pittston; recording secretary, P. F. Toole, Union street, Pittston; financial secretary, E. L. Rowan, 282 William street, Pittston.

\*No. 358, Perth Amboy, N. J.—Meets first and third Thursdays at Carpenters' Union Hall, Slicker's Building, 138 Smith street. President, V. Christofferson, 137 Fayette street; recording secretary, Geo. Skirm, 161 Washington street; financial secretary, Ambrose Mather, 44 East avenue.

\*No. 359, Iron Mountain, Mich.—Meets first Thursday, Spencer Hall, 122 W. B street. President, Quirin Stephany, 108 E. Ludington street; recording secretary, E. W. Mason, 219 E. A street; financial secretary, Conrad Carlson, 1120 River avenue.

\*No. 360, Sioux Fall, S. D.—Meets second and fourth Wednesday at Labor Hall, Syndicate Block. President, M. G. Lacy; recording secretary, Wm. Waples; financial secretary, F. B. Harris, 1125 East Ninth street.

\*No. 361, Lawrence, Kans.—President, Joseph Badsky; financial secretary, J. B. Ellis, 521 Mississippi street.

\*No. 362, Kankakee, Ill.—Meets every Monday at German I. O. O. F. Hall, 204 Court street. President, F. E. Jeffers, Hospital, Illinois; recording secretary, H. H. Boysen, 162 Dearborn avenue; financial secretary, A. E. Davids, 113 North Court street.

\*No. 363, Montgomery, Ala.—Recording secretary, Eugene Goolsby, 103 Clethron Ave.

\*No. 364, Guthrie, Okla.—Meets first and third Tuesdays at Armory Hall, 169 West Harrison avenue. President, Art Carpenter; recording secretary, W. F. C. Perry; financial secretary, A. H. Harmon, 324 Springer street.

\*No. 365, Fulton, Mo.—Financial secretary, Herman Glahn, Fulton.

\*No. 366, Allentown, Pa.—Meets first and third Sundays, Nagles Hall, corner 7th and Turner streets. President, J. S. Hoffman, 1315 Court street; recording secretary, John F. Gaffey, 183 Tilgham street; financial secretary, Charles Hoffman, 1315 Court street.

†No. 367, St. Louis, Mo.—Meets first and third Sundays, 2.20 p. m. President, C. A. Hose, 1927 Florissant avenue, St. Louis, Mo.; recording secretary, Nelson Bolan, Granite City, Ill.; financial secretary, G. E. Sutter, 4603 Cook ave.

†No. 368, New York, N. Y.—Meets second and fourth Wednesday, Union Hall, 1591 Second avenue. President, Thomas C. Lowe, 2558 Eighth avenue; recording secretary, Jas. S. Wellington, 223 W. 130th street; financial secretary, J. J. McCarty, 202 E. 96th Street.

†No. 369, Louisville, Ky.—Meets first and third Fridays of each month at Beck's Hall, Jefferson street, between First and Second. President, L. Rosenfield, R. F. D. No. 2, Sta. E.; recording secretary, J. A. Magness, 2231 Brook street; financial secretary, Dave Butterfield, 1767 Wilson avenue.

†No. 370, Los Angeles, Cal.—Meets every first and third Saturday at Council of Labor Hall, No. 3, 438½ South Spring street. President, C. R. Holmes, 714 Tehama street; recording secretary, C. E. Gough, 684 S. Grand; financial secretary, Hal Hamner, 319 West Avenue Fifty-one.



\*No. 371, Redding, Cal.—Meets first and third Tuesdays at Horn's hall, 516 California street. President, John T. Reed, Golden Eagle Hotel; recording secretary, J. C. Powel, Temple Hotel; financial secretary, D. W. Rathburn, 828 Gold street.

\*No. 372, Boone, Iowa.—Meets first and third Fridays at North Side Union hall, 917 Tenth street. President, H. C. Elliott, 515 Tenth street; recording and financial secretary, A. J. Berl, 1556 Fifth street.

\*No. 373, Oneida, N. Y.—Meets first Monday of every month at Trades Assembly Hall, corner of James and Elm streets. President, Irving B. Hawkins, 40 Seneca street; recording secretary, P. Lamont Barr, 124 Elm street; financial secretary, Henry Gasler, Boston street.

\*No. 374, Escanaba, Mich.—Meets every first and third Friday evening at Lemmer's Hall, 310 Ludington street. President, J. H. Harkins, 516 Wells avenue; recording and financial secretary, W. G. Compton, 308 Wolcott street.

\*No. 375, Jefferson City, Mo.—Meets second and fourth Sundays in each month at K. of P. Hall, corner High and Madison streets. President, M. P. Gaddis; recording secretary, W. D. Vandusen; financial secretary, Geo. W. Fleming, 418 McCarty street.

\*No. 376, Chicago, Ill.—Meets second and fourth Tuesday in each month at Electrical Headquarters, 196 Washington street. President, A. J. Mielke, 196 E. Washington street; recording secretary, Jno. Luebke, 196 Washington street; financial secretary, Thos. Queenan, 196 Washington street.

\*No. 377, Lynn, Mass.—President D. Duval, 81 Whittier street; recording secretary, L. A. Wentworth, 34 Leyman street; financial secretary, H. F. Bullock, 31 Whittier street.

\*No. 378, Sheffield, Ala.—President, F. C. Brumbach; recording secretary, R. K. Anderson.

\*No. 379, Greensburg, Pa.—Meets first and third Thursday of each month, at Glunts Hall, corner East Pittsburg street and Maple avenue. President, A. R. Mott, Franklin street; recording secretary, M. McLaughlin, 219 N. Main street; financial secretary, H. E. Peters.

\*No. 380, Salt Lake City, Utah—Station men—Meets every second and fourth Monday at Emporium Building, 11 West First South Street. President, H. P. Burt, 1519 Indiana avenue; recording secretary, T. C. Husbands, P. O. Box 971, financial secretary, H. P. Burt, 1519 Indiana ave.

\*No. 381, Chicago, Ill.—Fixture hangers—Meets second and fourth Tuesdays at Koch's Hall, 104 Randolph street. President, C. M. Hall, 185 Indiana street; recording secretary, O. H. Owens, South Harvey, Ill; financial secretary, O. A. Lawson, 449 Cornelia street.

\*No. 382, Columbia, S. C.—Meets Wednesday night, at Independence Hall, over Independent Engine House, between Main and Assembly streets. President, F. D. Cooper, Southern Bell Tel. Co.; recording secretary, J. W. Blease, Wm. Perry Electrical Co.; financial secretary, W. J. Jones, South Carolina Glass Works.

\*No. 383, Mattoon, Ill.—President, Harry Schock; recording secretary, Ned Malaine; financial secretary, L. Morganstein, Fire Department.

\*No. 384, Sydney, Nova Scotia—Meets every second Wednesday of each month at C. M. B. A. Hall, George street, Sydney, C. B. President, S. C. De Witt, Sydney, N. S.; recording secretary, Oscar L. Boyd, P. O. Box 415; financial secretary, J. P. Gallant, P. O. Box 415.

\*No. 385, Lawrence, Mass.—Meets first and third Mondays at Bugbee Hall. President, R. H. Morris, 167 Prospect street; recording secretary, T. H. Hogarth, 86 Andover street; financial secretary, J. J. McOrillas, 259 South Broadway.

\*No. 386, New Iberia, La.—Meets first Friday of each month, corner Main and Corinne streets. President, George Fay; recording secretary, E. R. Chivers; financial secretary, W. A. Broussard.

\*No. 387, Freeport, Ill.—President, C. L. Guion, 95 Cottonwood street; financial secretary, Chas. Kunz, 53 Ottawa street.

\*No. 388, Palestine, Tex.—President, C. M. Parkhill; recording secretary, D. E. Bostick; financial secretary, J. L. Turner.

\*No. 389, Paterson, N. J.—Meets every first and third Tuesday, in Columbia Hall, 462 Main street. President, F. H. Holmes, Lodi, N. J.; recording secretary, Charles Walton, 57 Twenty-third avenue; financial secretary, Geo. Twigger, 330 Market street.

\*No. 390, Johnstown, Pa.—Meets Thursday at Electrical Workers Hall, 337 Bedford street. President, Robert Fundenberg, 518½ Vine street; recording secretary, H. W. Apel, 531 Franklin street; financial secretary, F. W. Buchanan, 248 Adam street.

\*No. 391, Meridian, Miss.—President, I. H. McArther; financial secretary, W. J. Dalton, Box 70.

\*No. 392, Troy, N. Y.—Meets every Thursday night in Red Men's Hall, First and Congress streets. President, J. W. Lindsey, Lynd House; recording secretary, J. Seymour Scott, 18 Ingalls ave.; financial secretary, Robert Grant, 165 First street.

\*No. 393, Detroit, Mich.—Meets second and fourth Friday, in Johnson's Union Headquarters, corner Monroe avenue and Farrar street. President, George A. Dunkers, 478 Elmwood avenue; recording secretary, Sydney A. Smith, 369 Cass avenue; financial secretary, C. W. Guinness, 505 Trumbull avenue.

\*No. 394, Auburn, N. Y.—Meets second and fourth Mondays in each month at Mantel Hall, Water street. President, Thomas H. Mohan, 1 School street; recording secretary, D. D. Ehlers, 60 Washington street; financial secretary, Thos. H. Mohan, 1 School street.

\*No. 395, Kalamazoo, Mich.—Meets first and third Monday of each month, Trades and Labor Hall, South Burdick street. President, Geo. C. Milham, 722 Stockbridge ave.; recording secretary, Burton A. Whipple, 322 E. Lovell street; financial secretary, Morris W. Doyle, 426 Woodland avenue.

\*No. 396, Boston, Mass.—Meets second Wednesday, at Seaver Hall, Paine's Mem. Building, Appleton street. President, W. W. Emmons, 125 Milk street (basement); recording secretary, D. R. McGregor, 241 Minot street, Dorchester, Mass.; financial secretary, A. R. Young, 709 Broadway, Chelsea, Mass.

\*No. 397, Quebec, Canada. Meets first and third Monday at Moisons Hall, St. Helene and St. Anselme. President, E. L. Heureux, 394 St. Valier street; recording secretary, N. Mathurin, 238 St. Valier street; financial secretary, A. Boret, 18 Levis street.

\*No. 398, St. Cloud, Minn.—Meets every second and fourth Tuesday at A. O. U. W. Hall, corner Fifth avenue and First street, south. President, Gottlieb Gebrenback, Twelfth avenue N.; recording secretary, Harry Hamlin, Sauk Rapids, Minn.; financial secretary, F. B. Doten, 618 Sixth avenue, south.

\*No. 399, Portland, Me.—Meets every Tuesday at Farrington Block, Congress street. President, F. E. Sargent, 308 Portland street; recording secretary, Edward Tenney, 22 Paris street; financial secretary, A. G. Moody, 86 Lancaster street.

\*No. 400, Ottawa, Ontario.—Meets second and fourth Wednesdays at Murphy's Hall, Sussex street. President, M. F. Mead, 34 Murray street; recording secretary, C. G. Keyes, 467 Rideau street; financial secretary, A. Seguin, 30 Water street.

\*No. 401, Burlington, Iowa.—Meets every Monday evening at Carpenters Hall, Third and Jefferson street. President, L. R. Sherrill, 104 N. Main street; recording secretary, W. F. Moore, 918 S. Third street; financial secretary, W. F. Moore, 918 S. Third street.

\*No. 402, Portchester, N. Y.—Meets every first and third Monday nights at 8 each month, at Washington Hall, 115 North Main street. President, Andrew Bell, 26 Haseco avenue; recording secretary, Daniel B. Purdy; P. O. Box 240, Port Chester, N. Y.; financial secretary, J. C. Irving, Greenwich, Conn.

\*No. 403, Meadville, Pa.—Meets every second and fourth Wednesdays at Central Labor Union Hall, Water street and Mead avenue. President, Fred A. Berg, 732 Liberty street; recording secretary, Chas. A. Cummings, Park avenue; financial secretary, A. R. Simpson, Phoe Hotel.

**No. 404, Denver, Colo.**—(Winders)—Meets every Tuesday at 512 Charles Building. President, W. C. Metzgar, 115 West Bayard street; recording secretary, A. W. Gay, 1245 Clarkson street; financial secretary, Jack H. Cook, Hotel Midland.

**\*No. 405, Houghton, Mich.**—Meets first and third Thursday of each month at Union Hall, Sheldon street. President, John Crawford, Houghton; recording secretary, W. M. Bates, Houghton; financial secretary, E. J. Poirier.

**\*No. 406, Ardmore, Ind. Ter.**—Meets every Friday night at Union Hall, West Main street. President, E. M. Parker; recording secretary, John A. Ball; financial secretary, Adelma A. Holcomb, Box 346.

**\*No. 407, Marquette, Mich.**—Meets every second and fourth Saturday of each month at Siegel's Hall, N. Third streets. President, O. H. Siwert, 339 West Alger street; recording secretary, C. A. Ellstrom, 321 West Bluff street; financial secretary, G. H. Kemper, 511 West Ridge street.

**\*No. 408, Missoula, Mont.**—Meets every second and fourth Tuesday at Fireman's Hall, West Main street. President, J. B. Ashley, Missoula, Mont.; recording and financial secretary, C. H. Christensen, 805 East Front street.

**\*No. 409, Ithaca, N. Y.**—Meets first and third Saturday of every month at Central Labor Union Hall, East State street. President, W. W. Harding, South Cayuga street; recording secretary, J. W. Spaulding, 518 Willow avenue; financial secretary, O. Rittenhouse, 505 South Albany street.

**\*No. 410, Albany, N. Y.**—Meets first and third Mondays at 8 P. M., Laventall Building, Hounds avenue and South Pearl street. President, C. F. Mull, 461 Clinton avenue, Albany, N. Y.; financial secretary, W. F. Sanderson, Renalear, N. Y.; recording secretary, G. W. White, 1627 Second avenue, Watervliet, N. Y.

**\*No. 411, Warren, O.**—Meets first and third Wednesday nights at Amalgamated Association Hall. President, E. S. Kelley, North Second avenue; recording secretary, George P. Hardy, C. D. and P. Tel., Niles, Ohio; financial secretary, S. F. Messer, 318 North Tod avenue.

**\*No. 412, Mankato, Minn.**—Meets Thursday night of each month at Williams' Hall, corner Front and Hickory streets. President, W. C. Lestic, 327 E. Vine street, Mankato, Minn.; recording secretary, Chas. Brandon, 114 S. Fourth street, Mankato, Minn.; financial secretary, R. A. Anderson, box 140, Mankato, Minn.

**\*No. 413, Manila, P. I.**—President, Wm. Wirt, Box 547; financial secretary, C. H. Hulbert, Box 547.

**\*No. 414, Norwalk, Ohio.**—President, Ralph Farley; financial secretary, A. Graham, 117 E. Main street.

**\*No. 415, Cheyenne, Wyo.**—Meets every first and third Mondays, K. P. Hall. President, F. P. Edlind, 218 E. Sixteenth street; recording secretary, H. J. Gallivan; financial secretary, B. M. Vance, box 580.

**\*No. 416, St. Joseph, Mo.**—Meets every Thursday at Elect Hall, 114½ W. Fifth street. President, W. H. Winters, 507 S. Third street; recording secretary, H. F. Howard, 720 Main street—Main and Louis; financial secretary, J. A. Wells, 118 E. Isabell street.

**\*No. 417, Newburgh, N. Y.**—Meets every second and fourth Saturday at Labor Hall, Ann street, between Johnson and Liberty. President, John Gilroy Mezger, 1 High street; recording secretary, Raymond Hathaway Williams, 215 First street; financial secretary, Thomas Perrott, 32 Smith street.

**\*No. 418, Mt. Vernon, Ind.**—Meets second, third and fourth Monday nights at Franks Place, Main street, between Second and Third. President, Roscoe Combs, Mt. Vernon; recording and financial secretary, J. C. Maier, 328 Lower Sixth street.

**\*No. 419, Jacksonville, Ill.**—President, P. Traube; recording secretary, J. A. Lemington, 1018 N. Church street; financial secretary, O. Sorrelas.

**\*No. 420, Moberly, Mo.**—Meets second and fourth Tuesday night of each month at Lincoln G. A. H., Reed street. President, Riley Patterson, Moberly, Mo., care of Richmond Hotel; recording secretary, E. J. Hayes, 629 Culp street, Moberly, Mo.

**\*No. 421, Watertown, N. Y.**—President, G. B. Dickerson; financial secretary, Wm. C. Anderson, 1 Arlington street.

**\*No. 422, Hackensack, N. J.**—Meets second and fourth Tuesdays of each month, Armory Hall, corner of State and Mercer. President, D. T. Evans; recording secretary, Bert M. Pratt, 52 Main street; financial secretary, Walter Kingsley, Kansas street.

**\*No. 423, Montreal, P. Q.**—Meets First and Third Friday each month, at Arcanum Hall, 2444 St. Catherine street. President, L. R. McDonald, 2 Brunswick street; recording secretary, T. W. Rothery, 31½ Latour street; financial secretary, F. W. Cotten, 534 Antoine street.

**\*No. 424, Milwaukee, Wis.**—Meets every Thursday at 8 p. m., Weingert's Hall, 238 Fourth street. President, Wm. Mc. Fadden, Soldier's Home; recording secretary, J. W. Daley, 496 Twenty-seventh street; financial secretary, J. V. Field, 459 Sixth avenue.

**\*No. 425, Wilmington, Del.**—Meets first, third and fifth Fridays of each month, northeast corner Eighth and Orange streets. President, E. B. Ferrel, 802 West Sixth street; recording secretary, Isaac A. Gray, 1103 Shallcross avenue; financial secretary, R. S. Hertzog, 1112 King street.

**\*No. 426, Milwaukee, Wis.**—Meets every second and Fourth Fridays of each month at Harmony Hall, corner First avenue and Mineral street. President, Jos. Kain, 468 Clinton street; recording secretary, Frank Zimney, 954 Eighth avenue; financial secretary, Charles Nauertz, 648 Madison street, rear.

**\*No. 427, Springfield, Ill.**—Meets first and third Wednesday, at Electrical Workers' Hall, 210½ S. Fifth street. President, J. D. Valentine, 411 W. Canedy street; recording secretary, A. H. Barth, 615 E. Jackson street; financial secretary, R. W. Berry, 916 E. Edwards street.

**\*No. 428, Bakersfield, Cal.**—Meets every first and third Tuesday of each month at 1803 Chester avenue. President, Wm. H. Murray; recording secretary, C. T. Collins; financial secretary, J. E. Baker, 904 19th street.

**\*No. 429, Columbus, Ga.**—President, John Ralph, Automatic Tel. Company; financial secretary, C. A. Sides, Automatic Tel. Company.

**\*No. 430, Racine, Wis.**—Meets second and fourth Saturday of the month, at 8 p. m., at Trades Labor Hall, Fourth and Main streets. President, J. P. Brown, 1521 State street; recording secretary, Fred M. Brooker; P. O. Box 247; D. A. Howard, 1917 N. Chatham street.

**\*No. 431, Frederick, Md.**—Meets every first and second Saturday in the month at Farmer Hall at West Patrick street. President, H. H. Evans; financial secretary, S. F. Gardner, 187 South Market street.

**\*No. 432, Eau Claire, Wis.**—Meets second and fourth Tuesdays at Union Hall, corner Barstow and Wisconsin streets. President, George Headwick, 245 Barlond street; recording secretary, Chas. Anger, 948 Madison street; financial secretary, Louis Marsh, 521 Congress street.

**\*No. 433, Fremont, Ohio.**—Meets second and fourth Tuesday of each month at Germonade's Hall, corner of Park and Napoleon street. President, Ed. E. McCarty, 337 Harrison street, Fremont, Ohio; recording secretary, R. G. Dunfee, 401 Ash street, Fremont, Ohio; financial secretary, Wm. P. Stevens, Fremont, care U. S. Telephone Co.

**\*No. 434, Douglas, Ariz.**—President, J. H. Stewart; financial secretary, F. C. Farrington-care Douglas Imp. Co.

**\*No. 435, Marion, Ohio.**—Meets every Saturday at Central Trades Council Hall, South Main street. President, R. C. Owens, Ola street; recording secretary, Sylvester Rowe, 269 North Oak street; financial secretary, Fred Rowe, 269 North Oak street.

**\*No. 436, Oneonta, N. Y.**—Meets second and fourth Tuesdays at Trade and Labor Council Hall at 160 Main street. President, M. J. Young, 265 Main street; recording secretary, B. J. Waltz, 46 Academy street; financial secretary, Jno. O'Brien, 26 Broad street.

**\*No. 437, Fall River, Mass.**—Meets first and third Mondays in each month at I. B. E. W. Hall, 26 North Main street. President, T. D. Sul

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livan, 253 Fifth street; recording secretary, John E. Sullivan, 576 Plymouth avenue; Financial secretary, H. A. Manchester, general delivery.

**No. 438, Greater New York, N. Y.** (Electrical car workers.)—Meets every Friday, at 67 St. Marks place. President, John W. Schmidt, 688 Gates avenue, Brooklyn, N. Y.; recording secretary, E. M. Young, 6901 Third avenue, Brooklyn, N. Y.; financial secretary, Julius N. Ehrenberg, 112 East Eighty-third street, New York.

**\*No. 439, Alliance, Ohio**—Meets second and fourth Friday at Fogys Building, corner Mechanic and Main streets. President John McCaskey, R. F. D. No. 2; recording secretary, A. V. Stanley, 213 W. Main street; financial secretary, H. J. Erhardt, cor. Union and W. Main street.

**\*No. 440, Grand Rapids, Wis.**—Meets second and fourth Saturdays at Catholic Foresters Hall, East Side. President, Geo. M. Huntington; recording secretary, C. M. Dougharty; financial secretary, J. H. Noyes.

**\*No. 441, Janesville, Wis.**—Meets second and fourth Thursdays at Assembly Hall, corner Milwaukee and Franklin streets. President, James Fraser, recording secretary, Ed. Barron, 207 Cherry street; financial secretary, Joseph C. Shuler, 56 Palm street.

**\*No. 442, Spartansburg, S. C.**—Financial secretary, Fred Schueler, care of So. Bell Tel. Co.

**\*No. 443, Key West, Fla.**—Meets every first and third Tuesday at Key West Electric Company Plant. President, H. Z. Lee, Key West Electric Company; recording secretary, J. H. Harris, 809 Galveston street; financial secretary, E. E. Larkin, 321 Whitehead street.

**\*No. 444, Richmond, Ind.**—Financial secretary, J. L. McNeill, 105 North Ninth street.

**No. 445, Battle Creek, Mich.**—Financial secretary, P. Long, 21 Locust street.

**\*No. 446, Columbus, Ohio.**—Meets every Friday night at 7.36 p. m., at Lazarus' Block, High and Town streets. President, C. L. Sprague, Fourth and Oakland avenues; recording secretary, Harry Keras, 167½ So. High street, room 15; financial secretary, Frank Naus, 51½ W. State street.

**\*No. 447, Port Huron, Mich.**—Meets first and third Tuesdays in C. M. B. A. Hall, 935 Military street. President, Wm. J. McManus, 1504 Ninth street; recording secretary, H. S. Adams, Hotel Messenger; financial secretary, P. Leo Wittliff, 825 Griswold street.

**\*No. 448, Annapolis, Md.**—Meets every Thursday at 30 West street. President, Chas. B. Orrell, 30 West street; recording secretary, Wm. G. Fothergill, Eastport, Md; financial secretary, Ed. T. Beavin, 13 Cathedral street.

**\*No. 449, Augusta, Ga.**—Financial Secretary, J. L. Reed, care of Strowger Exchange.

**\*No. 450, Trinidad, Colo.**—Meets first and third Thursday, Poltry Block, Commercial street. President, E. T. Drout, Tel. Co.; recording secretary, Joe. Gayway, First street; financial secretary, John Nigro, general delivery.

**\*No. 451, New Decatur, Ala.**—President, J. H. Mackin, Ala. Traction Co.; recording secretary, Jas. Foster, Box 36; financial secretary, George H. Rider, So. Bell Telephone Co.

**No. 452, Pensacola, Fla.**—Meets every Wednesday at 7.30 p. m. at Central Trades Council Hall, Old Armory Hall. President, Gus. Boursette, 626 East Garden street; recording secretary, T. D. Adams, P. O. Box 793; financial secretary, W. C. Walker, 513 North Sixth avenue.

**\*No. 453, Sumter, S. C.**—Recording secretary E. H. Lynam, 311 West Calhoun street; financial secretary, Jas. Larisey, 108 South Harvin street.

**\*No. 454, Charlotte, S. C.**—President, J. R. Griffith; recording secretary, W. W. Norwood; financial secretary, S. J. Alexander, 503 Poplar street.

**\*No. 455, Shawnee, O. T.**—Meets every Thursday at Labor Hall. President, W. C. Campbell, 304 North Tucker street; recording secretary, B. Shipley, 215 E. Main street; financial secretary, H. Brown, P. O. Box 421.

**\*No. 456, Oklahoma City, O. T.**—President, W. C. Welch; recording and financial secretary, F. M. Johnson, 317 West Pott street.

**\*No. 457, Kenosha, Wis.**—Meets first and third Fridays, at Schlitz's Hall. President, F. O. Wood, 5 Park Court; recording secretary, Ellis Hogan; financial secretary, E. Parsons, 723 Exchange street.

**\*No. 458, Aberdeen, Wash.**—Meets every Sunday, 12 m., at Longshoremen's Hall. President, Frank Ratty; recording and financial secretary, M. O. James, 201 Heron street.

**\*No. 459, Cortland, N. Y.**—Meets second and fourth Tuesday at Martin Block, Main street. President, John J. McMahon, Grotin avenue; recording and financial secretary, W. H. Hartnett, 5 Sand street.

**\*No. 460, Chickasha, Ind. T.**—Meets second Friday night of month, at Perry's Hall, Post-office Building. President, C. P. Bowen; recording and financial secretary, V. L. Perry.

## DISTRICT COUNCILS.

District Council, Schenectady, N. Y.—Meets first and third Tuesday of each month, in Mohawk Hall, Brodt & Yates Building, corner State and Center streets. President, John H. Cornick, 808 Grant avenue; vice-president, Barney A. Cawley, 77 Second avenue; recording secretary, A. E. Sparks, 20 Cora street.

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No. 2, St. Louis, Mo.—H. Myers, 2635 A Olive street. C. E. Elmore, 1028 Franklin street.

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No. 5, Pittsburg, Pa.—F. Friedman, 302 Grant street.

No. 6, San Francisco, Cal.—Jos. De Vecmon, 27 Sixth street.

No. 9, Chicago, Ill.—M. H. Collins, office, Sam Jacks' Building, 83 Madison street.

No. 14, Pittsburg, Pa.—George Schmatzinetz, 302 Grant street.

No. 17, Detroit, Mich.—E. G. Smith, 32 Farmer street.

No. 18, Kansas City, Mo.—Neal Callahan, 1318 Forrest avenue.

No. 20, New York, N. Y.—P. J. McLaughlin, 149 North Portland avenue, Brooklyn, N. Y.

No. 23, St. Paul, Minn.—C. W. Hurd, 1895 Waltham avenue.

No. 25, Terre Haute, Ind.—A. R. Markle, 1027 Seventh avenue.

No. 26, Washington, D. C.—Edw. Nothnagle, corner Sixth and G streets, northwest.

No. 38, Cleveland, Ohio.—A. W. McIntyre, 83 Prospect street.

No. 39, Cleveland, Ohio.—Frank J. Sullivan, 83 Prospect street.

No. 41, Buffalo, N. Y.—A. Cunningham, Council Hall.

No. 42, Utica, N. Y.—Robert Kintzings, 30 Lincoln avenue.

No. 43, Syracuse, N. Y.—H. E. Yorker, 137 Wood avenue.

No. 45, Buffalo, N. Y.—James Shane, 78 South Division street.

No. 52, Newark, N. J.—Wm. Bamford, 236 Washington street.

No. 61, Los Angeles, Cal.—C. P. Lofthouse, 124 East Third street.

No. 68, Denver, Colo.—C. A. Nickerson, 218 Charles Block.

No. 86, Rochester, N. Y.—J. Monaghan, room 3, Durand Building, 58 Main street.

No. 95, Joplin, Mo.—W. A. Nielson, 715 Jackson.

No. 98, Philadelphia, Pa.—Jas. S. Meade, 1321 Arch street.

No. 102, Paterson, N. J.—R. Clark, 37 Benson street.

No. 103, Boston, Mass.—Henry R. Thayer, office, 987 Washington street.

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No. 114, Toronto, Canada.—W. J. Middleton, 18 Shaftsbury avenue.

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 No. 151, San Francisco, Cal.—J. S. McDonald, 921 Market street.  
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 No. 194, Shreveport, La.—R. L. Curtis, 323 Walnut street.  
 No. 184, Galesburg, Ill.—J. H. Shull, 266 Duffield avenue.  
 No. 210, Atlantic City.—Marshall Burkins, 117 N. Pennsylvania avenue.  
 No. 212, Cincinnati, Ohio.—J. C. Adams, southwest corner Twelfth and Vine streets.

No. 218, Seattle, Washington.—E. A. Clark, 132 Warren avenue.  
 No. 279, Chicago, Ill.—Wm. Bonnist, 83 East Madison street.  
 No. 288, Waterloo, Iowa.—I. J. Wright, care of Gas and Electric Company.  
 No. 324, Brazil, Ind.—C. J. Boland, care C. U. Tel. Co.  
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"There is a lady in 104 who wants two pairs of scissors."

"She wants what?" asked Mong in bewilderment.

"She wants two pairs of scissors," was the reply.

"Let me talk to her for a moment," said Mong, as he stepped to the desk telephone.

"Hello!" said Mong. "Is this the lady in 104?"

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"Did you order two pairs of scissors?"

"No," came the prompt reply. "I didn't order two pairs of scissors, but I did order two silver fizzes." Whereupon Mr. Mong quickly hung up the receiver and called "Front," while he held his sides from laughter.

"I thought she said scissors, anyway," insisted the pretty telephone girl when the situation was explained to her.—*Kansas City Journal*.

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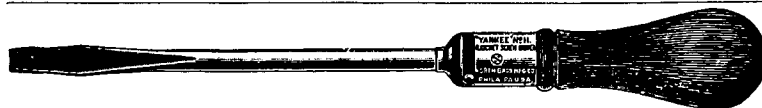
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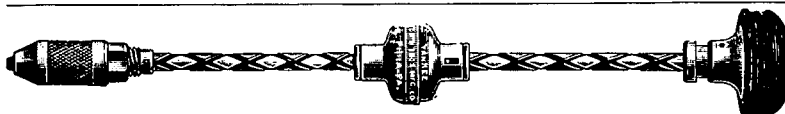
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